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# HDVideoPro

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## Contents

### Features

#### 34 SPEAKING TRUTH TO POWER

A quarter-century after the incendiary N.W.A shook the establishment cage, director F. Gary Gray and DP Matthew Libatique, ASC, deliver *Straight Outta Compton*, which follows the birth of the iconic group and their music

By Iain Blair

#### 40 MANHATTAN MISADVENTURES

Writer-director Noah Baumbach and DP Sam Levy shoot 2K for a '70s-inspired look in their latest collaboration, the funny, slightly dangerous screwball comedy *Mistress America*

By Iain Blair

### Equipment

#### 28 WIRELESS LENS CONTROL, ARRI STYLE

With three-axis lens control and a lens data display, the WCU-4 is an impressive remote system in an ergonomic housing

By Jim Matlosz

#### 32 HAWK V-LITE VINTAGE '74 ANAMORPHICS

This lens system from Vantage offers contrast, flare and other old-school "flaws" reminiscent of 1970s cinema built with state-of-the-art Hawk mechanics

By Jim Matlosz

**66 AT A GLANCE: HEADPHONE:X**  
New Headphone:X technology from DTS, Inc., delivers high-quality surround sound to almost any set of headphones

By Dan Brackett



## Breaking Trends

### 46 VIRTUAL REALITY CINEMA: A NEW MEDIUM EMERGES

VR has arrived, and with it, a new type of filmmaker capable of engaging viewers more deeply with content than ever before

By Robert Powell



### 50 THE ART OF BETTER PIXELS

The new Dolby Vision format from the audio giant dazzles, promising a wider color gamut with 21 stops of dynamic range to dramatically improve the viewer's experience

By Dan Brockett



## HD Independents

### 54 RISING DPS GET THEIR PROPS

The 2015 Emerging Cinematographer Awards recognizes some of the industry's next visionaries

By Valentina I. Valentini



### 58 THE TROUBLES WITH DOUBLES

Shot on the ARRI ALEXA, the razor-sharp comedy *Break Point* features a burned-out tennis pro and his estranged brother who try to win a long-shot slot into a Grand Slam—and heal a fractured family along the way

By Kevin H. Martin



## INSIDE STORY

In this issue of *HDVideoPro*, we look both forward and back. *Straight Outta Compton* gives us a taste of the '80s, sidestepping hair bands to focus on the rise of N.W.A, a group that gave explosive voice to a silenced generation and, in doing so, revolutionized music and culture in an unforgettable and powerful way. Twenty-seven years after their groundbreaking debut album, Dr. Dre, Ice Cube and the other N.W.A members are finally getting their stories told. We speak to director F. Gary Gray and DP Matthew Libatique, ASC, to uncover their cinematic approach

and methodology in capturing an authentic flavor of those iconic musical times.

Writer-director Noah Baumbach returns with *Mistress America*, a smart, fast-paced comedy reminiscent of classic Woody Allen movies. Cinematographer Sam Levy joins Baumbach for their third collaboration, capturing a retro '70s look by shooting 2K ProRes to tease out the ARRI ALEXA's natural grain and achieve a beautiful, glowing image to suit the story's tone.

Old school is also new again with the Hawk V-Lite Vintage '74 anamorphics, which embrace the contrast, flares, color aberrations and other flaws seen in lenses

that captured timeless '70s classics like *Chinatown*. These Hawk optics allow DPs to garner that signature look through precise, modern mechanics, negating the need to find old lenses that are often defected, damaged and impossible to replace on set.

Retrograde continues with the upcoming *FRONTLINE* documentary *My Brother's Bomber*, a real-life spy thriller following director/producer Ken Dornstein as he treks through the Middle East in search of the "Lockerbie Bomber," the man responsible for destroying Pan Am Flight 103 over Scotland in 1988. That explosion killed all passengers onboard, including Ken's

Jaimie Trueblood © Universal Pictures





younger brother. Five years in the making, we investigate how the compelling film kept up with technology amid the difficulties encountered traveling through the region.

If the past continues to entice, so does the future, especially the promise of Virtual Reality and the popularity of the Oculus Rift unit, a VR headset created by start-up Oculus VR. The company's acquisition for \$2 billion by Facebook, along with Google's \$542 million funding for VR start-up Magic Leap, indicates VR is now a commercially viable option. GoPro is set to enter the VR market next year, when it launches a six-sided spheri-

cal camera rig to shoot immersive video content. It seems VR's potential to establish a dramatically different cinematic art form is huge. The challenge now would seem to be deciphering a new language to tell stories like never before, using an experiential medium that allows you to go through the frame, enter the other side and inhabit an all-encompassing world.

As we wrap up, storyteller/director Jason Zada discusses fear—and why our brains love being scared. To Zada, fear is a positive emotion, as well as an intriguing one, as it reveals our humanity. His Emmy® award-winning personal cinematic experience

*Take This Lollipop* struck fear in the hearts of over 150 million people, a blend of multi-screen horror storytelling. Zada's first feature *The Forest*, a psychological horror thriller set in Japan's "Suicide Forest," will be released by Focus Features in January.

Finally, the past also has been reborn at *HDVideoPro*, as I've returned to the helm. Much has changed since I edited these pages, and I look forward to continually improving the magazine's vision and publishing thought-provoking material. I trust in your curiosity and keenness as an audience, and welcome your thoughts.

—Simon Wakelin, Editor



## 62 FROM LOCKERBIE TO LIBYA

A real-life spy thriller, the documentary *My Brother's Bomber* contemplates loss, love, revenge and the nature of obsession through the lens of the war on terror

By Valentina I. Valentini



## Columns

### 22 VIDEO ASSIST: SHARE THE SPEED

Plus, working with a colorist

By Michael Guncheon



### 26 AUDIO ASSIST: CHOOSING A WIRED LAVALIER

Plus, locating custom audio cable harnesses

By Dan Brockett



## Departments

4 INSIDE STORY 8 FADE IN  
14 RELEASES 68 HDVP  
MARKETPLACE 74 BIOPIQ



14



18

20



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## ALEXA **MINI**

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# Straight Outta Compton

Set against a volatile backdrop of gang violence, police brutality and racial tensions in late 1980s Los Angeles, the biopic *Straight Outta Compton* follows the birth of the iconic gangsta rap and hip-hop group N.W.A and their music. The film was directed by F. Gary Gray (*Friday*, *The Negotiator*, *Be Cool*), who aimed to depict the humanity behind the group's members, and shot by Matthew Libatique, ASC (*Iron Man 1* and *2*, *Black Swan*, *Noah*), and coproduced by former N.W.A members Dr. Dre and Ice Cube. The DP shot with the RED DRAGON and Kowa anamorphics, plus a set of spherical Zeiss Super Speed Mark IIIs.



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# Break Point

Estranged siblings—a burned-out tennis pro (Jeremy Sisto) and his schoolteacher brother (David Walton)—are at the heart of *Break Point*, a biting comedy that finds the Price brothers attempting to win an against-all-odds chance to earn a slot into a Grand Slam tennis tournament, and perhaps heal their fractured family along the way. Directed by Jay Karas (*Jim Gaffigan: Mr. Universe, Workaholics*) and lensed by DP Jim Frohna (*Afternoon Delight, Transparent*), the film was shot on the ARRI ALEXA with a Baltar lens package, a vintage set of Zeiss Super Speeds. Frohna says the director “wanted the film to have some grit and looseness of life to it that would inform both its look and the shooting style.”



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# My Brother's Bomber

A real-life spy thriller directed by Ken Dornstein, the documentary *My Brother's Bomber* follows his emotional five-year trek through the Middle East, searching for those responsible for the bombing of Pan Am Flight 103 over Lockerbie, Scotland, which claimed the life of his younger brother David. Cinematographer Tim Grucza invited cinematographer Rachel Beth Anderson to assist him in filming, and the pair used a variety of tools as the story and shooting style changed, from Canon EOS 5Ds and C300s to the Sony FS7 and a7S. As a freelancer, Anderson continues to work in the Middle East, giving her the opportunity to document important stories where emotions run high and the stakes are even higher. *My Brother's Bomber* airs in a *FRONTLINE* special three-part series on PBS beginning September 29.



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### NIGHT VISION

Capable of a stunning ISO-equivalent sensitivity of over 4,000,000 and a minimum subject illumination of less than 0.0005 lux, the **Canon ME20F-SH** delivers exceptional high light sensitivity at full-color HD resolution without the need for infrared illumination. Designed as a solution for cinematic productions, reality television or nature and wildlife documentaries, as well as nighttime surveillance and security, the ME20F-SH's enhanced 35mm full-frame CMOS sensor employs 19  $\mu$ m square pixels, more than 5.5x the surface area of pixels found on even the best interchangeable-lens cameras. Compatible with the Canon Cinema EOS System, the camera's EF Cinema Lock mount allows the usage of the extensive line of interchangeable EF lenses, and features like Canon Log and Wide DR enable enhanced dynamic range. Output-only 3G/HD-SDI and HDMI terminals are included, and a single cable attachment outputs to a variety of peripheral equipment like external recorders and monitors. Estimated Street Price: \$30,000. **Contact:** Canon U.S.A. Inc., [usa.canon.com](http://usa.canon.com).



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## THE DAVINCI CODING

**Blackmagic Design** has announced a public beta of **DaVinci Resolve 12**, the popular, easy-to-use editing and color-grading software suite. Available for free download via the Blackmagic Design website, updates include optimized media proxies, as well as custom settings for codecs and resolutions. A new Smooth Cut transition also uses proprietary DaVinci optical flow algorithms to provide seamless editorial transitions, while new support for Intel Iris and Iris Pro GPUs enables performance enhancements on a wide range of computers and laptops. Resolve 12 will be offered in two different iterations—a free version, DaVinci Resolve, as well as a paid version, DaVinci Resolve Studio, which will feature all of the capabilities of DaVinci Resolve, as well as multiple user and professional studio needs such as multiple GPU support, DCI 4K, 3D stereoscopic tools, collaboration tools and remote rendering. Allowing video professionals to edit, grade and finish projects all within a single interface, the **DaVinci Resolve Advanced Control Surface** includes the award-winning DaVinci hardware control panel, to boot. List Price: Free (DaVinci Resolve); \$995 (DaVinci Resolve Studio); \$29,995 (DaVinci Resolve Advanced Control Surface). **Contact:** Blackmagic Design, [blackmagicdesign.com/products/davinciresolve](http://blackmagicdesign.com/products/davinciresolve).



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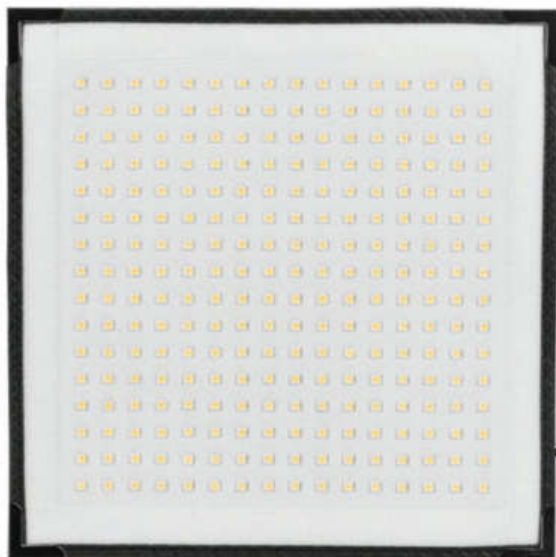
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Offering full electronic lens control for the RED EPIC, SCARLET and DRAGON, as well as the Sony PMW F3/F5/F55 and ARRI ALEXA Mini and AMIRA cameras, the **OptiTek ProLock** series of lens-mount solutions allows the use of standard autofocus Canon and Nikon glass on cinema cameras. Full electronic compatibility is offered for AI, AI-S and AF-S lenses, with aperture control for AF-S lenses built into the adapters. Iris scales are also engraved on the control ring for lens aperture values. List Price: Begins at \$995. **Contact:** OptiTek, [optitek.org](http://optitek.org).



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The **Redrock Micro ultraCage Scout** is a compact electronic follow-focus system for single operators using mirrorless or DSLR cameras such as the Sony a7S, Panasonic GH4 and Canon EOS 5D Mark III. The precisely balanced microRemote Fingerwheel follow-focus unit allows electronically controlled focus without moving hands or fingers from the grip. The rig can be collapsed into a Compact Mode for a smaller, cine-style rig setup or for use with gimbal systems. The Scout S is a cage-only version built for protection with an adjustable top arm (for cameras ranging from 91mm to 125mm tall) and two integrated cold-shoe mounts. Upgrading to the fully loaded Scout HX adds another top arm, powered and remote focusing abilities with the fingerwheel controller, as well as a motor and cabling. The Scout HS lacks the motor and cable. List Price: \$475 (ultraCage Scout S); \$1,499 (ultraCage Scout HS); \$2,499 (ultraCage Scout HX). **Contact:** Redrock Micro, [store.redrockmicro.com/Catalog/ultraCage-blue-DSLR-Handheld-Rigs](http://store.redrockmicro.com/Catalog/ultraCage-blue-DSLR-Handheld-Rigs).



## PORTABLE POWER

The **Mobi Gen** from **FreeWire** is designed as an ecofriendly replacement for traditional diesel and gas generators. Outputting 240VAC and 120VAC, the Mobi Gen is able to power lighting and gear for up to 12 hours at 2000W, 6 hours at 4000W or 3 hours at 8000W. On location or on set, the wheeled, 30 kwh lithium-ion battery system eliminates the pollution and noise concerns of traditional generators for a studio lighting power solution that's both clean and quiet. Rental Price: Begins at \$300/daily. **Contact:** Hive Lighting, [hivelighting.com/rental/mobi-gen-high-power-battery](http://hivelighting.com/rental/mobi-gen-high-power-battery); FreeWire Technologies, [freewiretech.com](http://freewiretech.com).

## PHOTOSHOP FOR AUDIO FILES

Available as software for both Windows and Mac, **SpectralLayers Pro 3** from **Sony Creative Software** allows you to work with individual sounds in an audio file similar to objects in a photograph. Offering seamless interoperability with Sound Forge Pro 11 and Sound Forge Pro Mac 2.5, Pro 3 provides options for remixing, pitch correction and precise repairs or removal of unwanted noise and artifacts through noiseprint-based noise reduction and isolation of music or dialogue through component layers. The upgrade includes a number of updated features such as 24-bit/192 kHz performance, redesigned panels for Layers and Selection Tools, a new waveform display, a 3D Displace feature for visualizing spectral audio data and an Overview Bar for a graphic color-coded representation of selection range, program length and location. List Price: \$399; \$199 (upgrade). **Contact:** Sony Creative Software, [sonycreativesoftware.com/spectralayerspro](http://sonycreativesoftware.com/spectralayerspro).



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# Share The Speed

Plus, working with a colorist

By Michael Guncheon



Communication is key when collaborating with a colorist. With a rendered movie of the locked cut, your colorist can verify that he or she has conformed your sequence properly, as well as help interpret the cinematography as it relates to the story.

Courtesy of Michael Guncheon

## SHARING YOUR DRIVES

*I'm really enjoying the speed I'm getting with the Thunderbolt on my new Mac. What's also refreshing is that it seems a lot more reliable than what I was using before. I was using SATA connections and it worked pretty good—when it worked. Now I have a project where I'd like to share my drive between two edit setups. Since there are two connectors, can I just connect them with two cables? Would I need some software to make it work?*

S.S.

*Via email*

The SATA connections you were using are eSATA connectors. These are an external version of how many hard drives connect to computer motherboards. eSATA became a popular way to compete against FireWire before the widespread use of USB 3.0. Your mention of “when it worked” could refer to some systems’ lack of support for hot

swapping. Hot swapping means being able to disconnect (and reconnect) a drive without having to shut down the computer.

With USB and FireWire, hot swapping was just taken for granted. All you had to do was “eject” a drive via the operating system and then you could remove the connector. But, with eSATA, particularly in its early days, some motherboards didn’t support this feature by default. Instead, for best results, you had to completely shut down the computer.

Now that you’ve moved on to Thunderbolt, let’s see about sharing your drive. You mention it has two connectors. They’re really there to be used in a daisy-chain configuration—looping from one device to another in a chain of up to six devices.

Although you could try to make the case for “chaining” two computers together, there’s the problem of a host (the controlling device for the chain). In

this case, the host is your Mac. The host decides when to open a file on a hard drive, when to write to it and when to close it. If you connect two computers to the drive, which one has priority? What if they both try to modify a file at the same time?

Another way to understand the concept is to think about replacing the external hard drive with a monitor. If you hook up two computers to a single monitor, which computer would it display?

But, wait! You can use Target Disk mode. This connects two Macs together via FireWire or Thunderbolt. What about hosts in this situation, where there isn’t even an external drive involved?

With Target Disk mode, you’re really turning one of your Macs into a hard drive. Once booted up in this mode (holding down “T” when it boots up), the computer only functions as a hard drive. You can’t use it to edit or even to

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\* GY-HM200 shown with optional microphone.



view a file. The only operation you can do is to shut down—so it can boot back up as a normal computer.

There's another way to connect two Macs via Thunderbolt and still have them operate normally: Thunderbolt bridging. Beginning with the Mavericks version of the OS X operating system, the Thunderbolt interface can be used as a network interface.

To use Thunderbolt bridging, once the two computers are connected via a Thunderbolt cable, you go into the Network section of System Preferences on each machine and add a Thunderbolt Bridge service. Use the default settings, and the computers will see each other. If you then "share" the Thunderbolt drive that's connected to one of the computers (using the Sharing section, also in System Preferences), both computers will have access to it. Of course, you'll have to manage who gets to erase or modify files using the normal file permissions built into the operating system.

With the Thunderbolt Bridge setup, the computer with the Thunderbolt drive acts as a server. That implies some performance degradation. This can be noticeable if you also try to use that computer to edit. In short, it works, but you might be reminded of some of the early experiences of eSATA.

I've seen attempts at trying to daisy-chain three computers via Thunderbolt, but unless you have more than two Thunderbolt ports on the middle computer, you lose any Thunderbolt access and get even more of a performance hit.

All of these warnings shouldn't make you ignore the concept of Thunderbolt bridging. It can be a useful tool when you want to transfer files quickly from one workstation to another, even if you never use it for real-time editing.

If you really want to share storage via Thunderbolt, you'll want to check out Accusys ([accusys.com.tw](http://accusys.com.tw)). They recently announced a shared disk array with four Thunderbolt ports. Note that this device still requires some additional hardware and software to manage file sharing.

## SPEAKING UP ABOUT COLOR

*I've finally arranged to have one of my films go through color grading in a couple of months with a real colorist, once I get everything shot and edited. I've done it all myself in the past with some plug-ins and presets, but I find it all looking the same. Anyway, I'm a little nervous about getting what's needed and, quite frankly, also a little embarrassed to start asking questions now that it's going to happen. How should I prepare?*

M.R.

Via email

**A** Congrats on collaborating with a colorist on your next project! I know it can seem intimidating, with all the special control panels and the expensive monitors that are calibrated regularly. Oh, and the hourly rate. But the colorists I know don't bite.

I recently tried out some grading software and realized that I really wanted to see an artist run it. I asked a friend if I could sit down with him and watch him use the software, and was amazed at what he could do with it. While I know that I'm not a colorist, I didn't realize

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what a far cry I am from being one.

After a while, we began talking about the whole process of color grading. The art and science were fascinating, but I wanted to get into some of the pitfalls that my friend runs up against working on so many different projects with so many different people.

One of the biggest frustrations he expressed was directly related to what you're afraid of: communication. He said it's surprising how many times people will show up with a drive and expect to begin grading. It can be done, but it's not usually such an efficient process. Instead of using all of his energy on the grade, half his time is spent getting things to the point where he can start grading.

Typically, the colorist wants an XML, AAF or EDL, or some sort of data sequence with links to the original footage. That way, he or she can grade the shots in edit order and see how they cut together. But before the colorist can work on the look, he or she has to conform the XML and make sure all the footage links up properly. That doesn't always happen very easily.

For example, my friend recently graded a project with a number of drone shots. The fact that the footage was shot with a drone wasn't the issue—it could have been any number of B cameras. The issue was that many of the original clips had identical names and identical time codes. This meant that, when he tried to automatically link the footage, there were lots of clips that were either offline or in the wrong place. With a sequence containing hundreds of clips, and an original footage drive containing hundreds of folders, the better part of the first day was spent trying to conform the sequence.

Another session started off on the wrong foot when the XML pointed to rendered files rather than original footage. And yet another session got bogged down because shots were synced with double-system sound in the timeline, and the XML was looking for audio files with names that didn't exist.

Having a conversation about how you're going to supply the "right stuff" is critical. You really want the colorist to work on grading, not media management.

Make sure you give your colorist a rendered movie, with audio, of the locked cut, as well. Although you've been eating, drinking and sleeping your project for months or more, this is the first time the colorist has seen it. Having the rendered movie gives the colorist a chance to see your film. It also can be used to verify that he or she has conformed your sequence properly.

Finally, give the colorist time to see what you've shot. If you just sit down and say, "Let's go," you aren't letting the colorist help interpret the cinematography as it relates to the story. As a result, he or she can end up just following your lead, and that really isn't collaboration. Obviously, you're the director and the buck stops with you, but when you box people in by not giving them—and you—the opportunity to create, collaboration becomes just a word.

More about this next column, as I cover what the colorist has to work with once the grade begins. HDVP

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By Dan Brockett

We recently upgraded from the Canon EOS 5D Mark III DSLR to a Canon EOS C100 Mark II. It will be so incredibly convenient not to have to utilize a separate recorder for decent sound. We shoot a lot of in-studio interviews with two talent, so I want to buy two new lavalier microphones. We have a low-end lavalier that we used with the Zoom H4n, but now that we have a higher-end camera, I'm not sure which wired lavaliers would sound best in our situation, which is a fairly quiet soundstage. What do you recommend?

Maria M.  
Via email

Assuming you already own a decent set of headphones, you'll want to budget in the neighborhood of \$600 to \$900 for a pair of quality wired lavalier microphones. Even though you may not want to hear this, I would also recommend you keep your Zoom H4n handy. Here's why:

The Canon EOS C100 Mark II is an outstanding camera recording decent audio quality. My company owns and shoots with the original C100, and we often rent the C100 Mark II and the C300. While camcorders aren't known for their high-end, brilliantly clear sound, the Canon EOS Cinema line of cameras has very usable sound quality, especially for dialogue.

Why keep the Zoom H4n? As you know, the C100 Mark II only records two channels of audio. You mentioned that you shoot a lot of two-person interviews. If you only use two lavalier microphones for your two-person interviews, what would be your backup plan if one of the talent accidentally brushes the mic with their hand or if the lavalier begins picking up some clothing rustle



As you consider your needs as far as frequency response, size, design and budget, the Sanken COS-11 (above) is one of a number of high-quality wired lavalier microphone solutions.

or noise mid-interview? You'll have to stop the interview, fix the sound issue and re-take the question/answer where the sound problem occurred.

However, if you run a boom microphone into your Zoom H4n and record “wild,” you also would have a secondary alternative to go to if a lavalier has a problem. I often shoot two-person interviews with the C100 and always bring along either our Zoom H4n ([zoom-na.com](http://zoom-na.com)) or the Tascam DR-40 or DR-60 ([tascam.com](http://tascam.com)) to record a boom microphone on a third track in addition to the two tracks in the camera.

As far as which lavalier(s) to purchase, there are many high-quality choices available to you; it all depends on what your preferences are as far as frequency response, size, design and budget. While no means an exhaustive list, here are a few of the more popular lavaliers I've used, tested and written about over the past couple of years.

The Tram TR-50B (trammicrophones.com, available as a kit for about \$310 from various retailers, too) is an industry-standard microphone that has been popular for decades. If you need a very small lavalier that's easier to hide on-screen or in wardrobe, you can't beat the Countryman B6 (countryman.com,

available as a kit for about \$285); it's the smallest microphone on the market and has very good, clear sound quality. The OST 801 and 802 (about \$180, with an XLR power supply) are similar to the industry-standard Tram, but retail directly from the manufacturer's website ([oscarsoundtech.com](http://oscarsoundtech.com)); they're a good choice if budget is tight. The Sanken COS-11 is regarded as a popular high-end lavalier ([www.sanken-mic.com/en](http://www.sanken-mic.com/en), about \$470 from various retailers) that you should take a listen to, as well.

I recommend making a visit to a local location sound retailer to audition microphones whenever possible. It's too inefficient to order multiple mics online, audition them and then go through the hassle of returning the ones you don't like. Hook up with a retailer, if possible, or network with a local location sound mixer who might be willing to let you take a listen to what he or she uses. All of these lavaliers sound different and are better or worse for specific applications, so you can make the best choice for your needs by carefully considering your options before buying them. With proper care, a quality lavalier will last you many years. I've been shooting with the same pair of Tram TR-50Bs for over 15 years, and they still sound great.



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## CUSTOM CABLE HARNESSES

*Cable bulk is driving me crazy. I own a Sound Devices 788T recorder/mixer and often record using all of the inputs while working out of a sound bag. By the time I add Comteks and multiple wireless receivers, I almost need another sound bag just to carry the bundled and attached cables. I know there are options for assembling my own cable harness, but can you advise me of any known quality sources for a custom cable harness that I could design with thinner wire to reduce the bulk and weight of the cables I'm carrying around? I don't really need a full-thickness TA5F cable to XLR for a 12-inch run from wireless receiver to mixer input. Any ideas would be appreciated.*

George C.  
Via email

There are several options for custom cable manufacturers that I've personally dealt with in the past. Trew Audio, Location Sound, Markertek or any of the larger regional location sound companies usually have a facility for building custom cables, but in case they don't have what you're looking for prebuilt, I would check out this website, [locationsoundcables.com](http://locationsoundcables.com).

Although the owner, Stuart Torrance, is located in the UK, he does beautiful custom cable work. Mr. Torrance is a location sound mixer and truly knows exactly what you need, and there's an image of a low-profile cable bundle he created for the Sound Devices 788T right on his web page.

The low-profile cables he builds are aesthetically pleasing, as well as much lighter than the normal cable bundled into most sound harnesses. I particularly

like the right-angle connectors, paired with the low-mass woven-cover cables that can be custom color-coded so you can easily attach and re-route the connections under lower-light conditions. Custom cables aren't inexpensive, but if you're a sound professional, you need tools that make your job simpler and more time-efficient. A custom cable harness for your 788T will accomplish both goals. HDVP  
16 CFR Part 255 Disclosure: None of the

manufacturers mentioned compensated me to write this article. The companies didn't send me review units to try out the hardware. I own several of the microphones mentioned, all purchased at full retail price by either my production company or myself. No material connection exists between the manufacturers mentioned in the article and myself.

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# Wireless Lens Control,



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ALEXA line of cameras—the Plus, Plus 4:3, XT/SXT Plus, Studio, XT/SXT Studio, 65 and Mini—ARRI's Wireless Compact Unit WCU-4 is a lightweight, handheld, remote-control system for lenses. No motor controller or extra power is required to use the WCU-4, as each camera possesses its own onboard wireless radio to easily take advantage of the unit's compact, ergonomic housing. The WCU-4 works great with the Universal Motor Controller UMC-4 on the ALEXA, ALEXA XT, AMIRA and third-party camera systems utilizing professional lenses.

To say ARRI's design is a remarkable feat is an understatement. The user-friendly unit's infinite control with solid feedback enhances the collaborative process on set, easing extensive demands placed on camera assistants when using this most revolutionary remote focus to hit the market in close to a decade. The WCU-4 will work with any camera using any cinema lens, along with a number of ARRI camera control units. This includes the UMC-4, which can additionally control camera settings, as well as the Single Motor Controller SMC-1 (perfect for Steadicam or camera drones), the Controlled Lens Motor CLM-3 (a strong, fast lens motor to drive heavy, difficult-to-operate lenses), and the CLM-4 (a quiet lens motor to drive any standard lens). The UMC-4 also can be used with the Zoom Main Unit ZMU-3A, a handgrip zoom controller that looks and feels like an updated version of any number of standard industry zoom controllers.

Additionally, other ARRI tools can be paired with the WCU-4. For simple, single-axis motor operation, the Single Axis Unit SXU-1 is easily capable of controlling focus, iris or zoom. The Lens Data Encoder LDE-1 is also a valuable tool on set. For example, if a 1st AC insists on using a mechanical follow focus like the ARRI FF-4, and VFX still wants to know what's happening with the focus during a shot, the LDE-1 can be used to capture

With three-axis lens control and a lens data display, the WCU-4 is an impressive remote system in an ergonomic housing | **BY JIM MATLOSZ**

# ARRI Style

ARRI's Wireless Compact Unit WCU-4 includes features like touch-screen control, vibrating stop markers, 3-channel control, a lens data display, a backlit focus knob, pre-marked focus rings and focus tracking.







The WCU-4 offers full control over the camera to set frame rate, shutter angle, exposure index and more in an ergonomic design weighing only 1.7 pounds, making it one of the lightest 3-axis hand units on the market today.

the data of the marks being moved for focus. Keep in mind that if using ARRI motors, metadata capture is always available either in-camera (Plus module) or on an SD card in the UMC-4.

ARRI's Electronic Control System can operate with up to two additional hand units with the UMC-4 in place. This setup gives filmmakers the option to use a separate controller for zoom and a third for focus or *f*-stop. The WCU-4 also provides real-time, frame-accurate informational display on all three axes, including depth of field, even though each motor is working independently and being regulated by its own controller.

When working with the Ultrasonic Distance Measure UDM-1, the focus motor can be set to continuously track the focus of a given object in a frame. This ostensibly creates an autofocus mode that can be overridden at anytime. The focus knob comes with adjustable friction that can be adjusted for personal preferences, its vibrating function indicating when preset focus marks have been hit. The WCU-4 comes with a large lens data display that reflects ambient light and remains clearly visible in direct sunlight, while its backlit focus knob and control buttons allow the unit to be used in darkness and low-light conditions.

All these tools offer filmmakers absolute control over their equipment in just about any situation. As a camera-interface, remote-control system, the WCU-4 is unparalleled in the field when working in conjunction with the ALEXA line of cameras. Functions such as Record start/stop, frame rate, shutter angle, ASA, color temperature, built-in ND filters, monitor output and false color can be viewed and adjusted easily. All ARRI lens tables

are already available in the ALEXA Plus and UMC-4 firmware.

In keeping with the continued trend to have effects in place on almost every shoot, the WCU-4 offers some highly useful tools for the VFX pipeline. Frame-accurate lens data records the status of the lens, including *f*-stop, focus, lens size and time code, all stored as metadata along with the images during the recording process. This highly accurate data also allows lens mapping to pre-marked focus rings and focus tracking with

the UDM-1. Metadata is captured with any ARRI LDS-enabled lens and can be downloaded with or without the WCU-4.

All this data allows for matching and creation of virtual lenses in postproduction, as well as seamless mapping and a more fluid workflow from production through VFX post. The WCU-4 is also designed for use as a broadcast-friendly unit, optional adapter modules providing direct compatibility and control of iris, focus and zoom on many broadcast and ENG Motor Controller EMC-1 lenses.

The WCU-4 is clearly the next step in modernizing camera and lens control. Several of the units are currently in the field, and Joe Segura, 1st AC, Local 600, recently used the system to great effect. "I tested it when I worked on the

feature film *Dope*," he explains. "The unit can be used on everything from rickshaws to cranes to Steadicam and handheld shots."

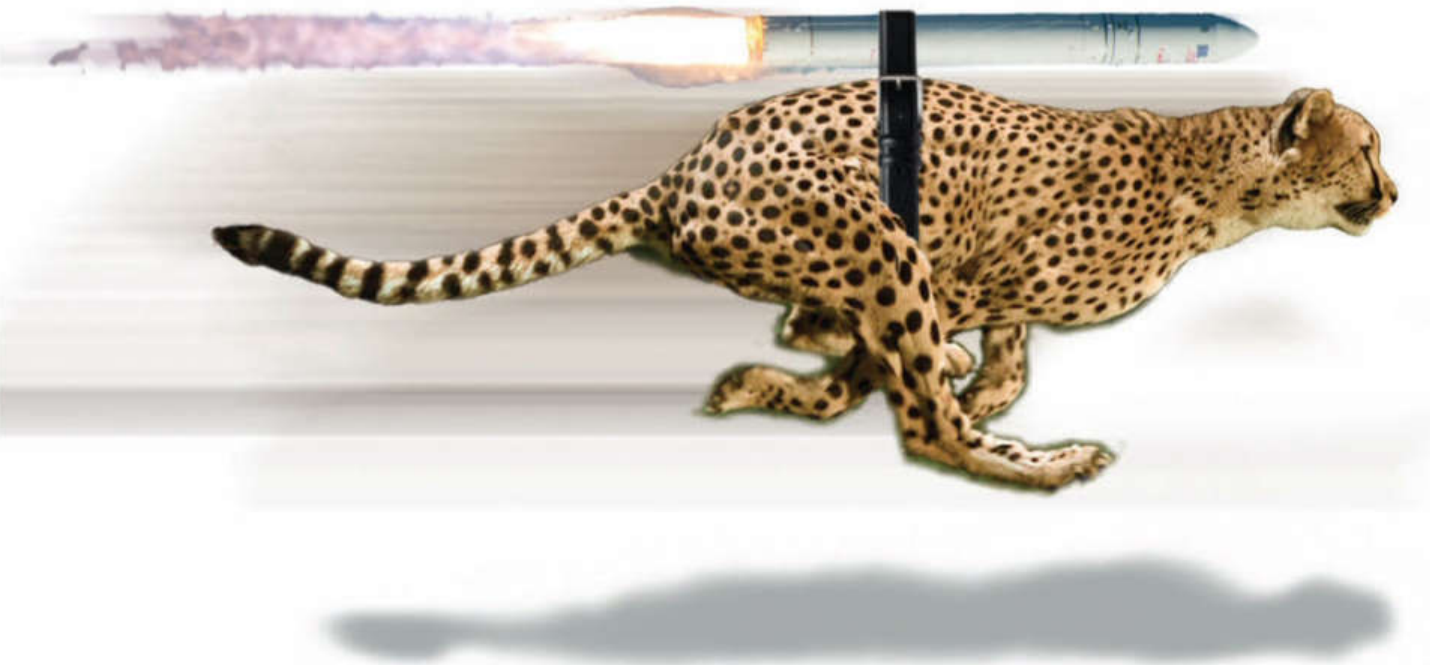
The WCU-4 is also compatible with Cinetape Plus monitors that can display ARRI Lens Data information, such as Transvideo, as well as Cmotion hand units.

HDVP



The WCU-4 is part of ARRI's Electronic Control System; when the Universal Motor Controller UMC-4 is engaged, additional hand units can be used, giving filmmakers nearly infinite control.

For more information on ARRI products, visit [arri.com](http://arri.com).



# We took awesome and made it *awesomer!*

The Odyssey7Q+ integrates with the Sony FS7 and FS700 cameras more than any other monitor/recorder, expanding their abilities.

Utilizing the Odyssey RAW Bundle, the Odyssey7Q+ can record 4K60p RAW and 2K240p RAW. Apple ProRes recordings straight from the RAW data include 4K60p & UHD60p, 2K60p & HD60p SuperSampled from 4K RAW for the highest quality, and HD240p. From the FS700 the Odyssey7Q+ can also record a 4K120p Burst in RAW or capture it in Apple ProRes in 4K & UHD, or SuperSampled to 2K & HD.

These resolution, frame rate, and format combinations are not possible on the cameras' internal recording. And at HD240p, the FS7/FS700 & Odyssey7Q+ combination is the highest speed Apple ProRes system in the world. Note that the FS7 requires the XDCA Extension Unit in order to access all of the full sensor data.

The Odyssey7Q+ can show 4K or 2K in full 17:9 on its screen, and send them in letterbox to 16:9 HD monitors via SDI & HDMI outputs. The Odyssey7Q+ can also de-squeeze anamorphic and send corrected images to other monitors as well. The Odyssey LUT System can selectively apply custom 3D-LUTs to its screen, exposure tools and/or each of the video outputs. Custom frame guides, adjustable exposure and focus tools and an OLED screen allow the most accurate view of what the camera sees.

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# HAWK V-LITE Vintage '74 ANAMORPHICS

This lens system from Vantage offers contrast, flare and other old-school “flaws” reminiscent of 1970s cinema built with state-of-the-art Hawk mechanics

**BY JIM MATLOSZ**

**Digital sensors continue to improve in** quality of image capture, allowing filmmakers to push their creativity and experiment with a variety of specific looks. Yet, as lens manufacturers continue to reach new heights in lens quality, cinematographers are often found degrading new lenses, applying techniques and know-how to “take the edge off” of contrast, sharpness and overall image quality.

Cinematographers are often tasked with searching the archives for older lenses that possess a natural aesthetic built in, but finding these older lenses can sometimes be difficult, plus certain engineering flaws can also make using them a challenge on set. In tandem with cinematographers seeking older lenses, a trend has emerged where projects have returned to the classic anamorphic look of old.

Watching films from the 1970s reveals that their organic quality wasn't just a product of film stocks, but also the engineering and quality of the lens elements of the day, where the limitations of glass quality and technology created a “look” that cinematographers find



very appealing. Unfortunately, such aesthetics were abandoned over time, as continually sharper and less “flawed” glass made its way to market and into the cinematographer’s hands.

Vantage took note of these trends and created the Hawk V-Lite Vintage ’74 anamorphic lenses, designed to deliver what cinematographers often have fretted over for quite some time—acquiring lower-contrast images with chromatic and flare characteristics reminiscent of the older, 1970s-era lenses.

The Vintage ’74s also offer the ease and convenience of precise, modern mechanics, plus the dependability, sharpness and consistency that has become the hallmark of all Hawk lenses. Vantage, the lens design team and rental house behind the Hawk lens systems, notes, “After listening to our customers, we noticed a very strong interest in older lenses due to their unique defects. We understood that these so-called defects were actually tools used by cinematographers to subtly communicate certain feelings or moods to the audience.”

The lenses are designed using new glass elements and mechanical engineering, and are thoroughly compatible with motor-driven follow-focus devices, clip-on matte boxes and other modern lens tools. They feature robust, clear markings far more durable and resilient than lenses of old, capable of handling the physical punishment often inflicted by filmmakers on set. The lenses are also fully supported by Vantage in case of service needs.

Filmmakers will be pleased to learn that the Vintage ’74 lenses offer a true anamorphic 2x squeeze in PL mount. The lenses will operate with “open-gate” 4:3-format and 16:9-format sensors, as well as 35mm film. There’s a full range of eight primes, from 28mm to 140mm, as well as two front anamorphic zoom lenses, the V-Plus 45-90mm and 80-180mm. Historically, anamorphic lenses tend to run deeper stops, and these Hawk lenses are no exception. Their wide-open settings range from F2.3 on the wider end to F3.7 on the longer primes.

To boot, while the wider 2.40 format tends not to be a close-up genre, the Vintage ’74 lenses average an impressive 3-foot distance for close-focus work.

The buzz about these “old-style lenses” is also gaining momentum in the film community, as more cinematographers seek to discover fresh new ways of expanding their creativity in the digital world. A handful of Hawk V-Lite Vintage ’74 anamorphics are currently being used by Janusz Kaminski on *Bridge of Spies* with director Steven Spielberg. DP Markus Forderer is also using the new lenses on *Stonewall* with director Roland Emmerich.

With the return to anamorphic as a viable cinematic medium and storytelling format, there no doubt will be continued interest in the Vintage ’74 lenses. The goal of any passionate cinematographer is to experiment, revel in uninhibited stories and pull out of the digital format as much emotion as possible. And thanks to Vantage and their recognition of that goal, cinematographers now can use modern optics with the contrast, flares, color aberrations and recognizable flaws that are seen in timeless films such as *Chinatown*. As Bill Bennett, ASC, recently noted, “I tested the Hawk Vintage ’74 anamorphic lenses, and they’re positively beautiful to use on women.”

HDVP

*To learn more about the Hawk V-Lite Vintage ’74 Anamorphic lens system, visit Vantage at [www.vantagefilm.com](http://www.vantagefilm.com).*



Cinematographers often look to capture the beautifully flawed characteristics reminiscent of films from the '70s, such as flares and lower contrast. The Hawk V-Lite Vintage ’74 Anamorphic lens system offers a true anamorphic 2x squeeze in PL mount, in a full range of primes from 28mm to 140mm, plus two zooms.



A DJ wearing a cap and sunglasses performs at a nightclub, gesturing to a crowd with their hands raised. The scene is lit with purple and blue stage lights. A person in a Raiders jersey is visible on the right. The background features stage equipment and bright spotlights.

# **SPEAKING TRUTH TO POWER**



A quarter-century after the incendiary N.W.A shook the establishment cage, director F. Gary Gray and DP Matthew Libatique, ASC, deliver *Straight Outta Compton*, which follows the birth of the iconic group and their music | **BY IAIN BLAIR**

**F. Gary Gray first made his name directing hit** music videos for artists such as TLC, Cypress Hill, Dr. Dre, Ice Cube, Queen Latifah and Whitney Houston before helming his first feature film, the popular urban comedy *Friday*. Gray followed that up with an eclectic string of maverick movies that included *Set It Off*, *The Negotiator*, *The Italian Job*, *Be Cool* and *Law Abiding Citizen*.

Gray explains that *Straight Outta Compton*—coproduced by former N.W.A members Dr. Dre and Ice Cube—marks a return to his music roots, but with some big differences. “We all know that with music biopics you’re gonna get sex, drugs, rock ‘n’ roll,” he asserts. “That’s to be expected.

But you don’t normally associate getting a deeper level of humanity because of the film’s gangsta rap and hip-hop music.”

That humanity was explored by Gray to uncover the truth and history behind N.W.A. “I really wanted to tap into the ‘why,’” he continues. “Why would a 16-year-old write these harsh, edgy lyrics about cops and the system, and describe really insane street moments that are cinematic in their own right? Why would someone do that? Do you just wake up in a comfortable world and you’re an angry person? I felt I knew the answer because I

grew up in that environment. L.A. in the ‘80s was a rough place and time. There was this huge influx of cocaine that changed the economic dynamic, plus you had the influx of military weapons flooding the neighborhoods. N.W.A wrote about all that, so we knew the ‘where’ and ‘when’—but it’s the ‘why’ that I wanted to explore. It was all about digging deep into the people’s lives behind the words and the music, discovering the humanity behind those people. That’s what I hope sets this movie apart from your typical music biopic. You get the sex, drugs and rock ‘n’ roll because that’s entertaining, but the depth and the performances you’d normally get with a different kind of drama will surprise people, I think.”



The first challenge of pulling together what’s essentially a period piece was where to shoot. “For budget reasons, we were originally scheduled to shoot in one of the tax rebate states like Louisiana, and even considered Miami, Boston and Vancouver. That’s pretty weird! Take Boston—besides the fact, they hate the Lakers, how can you even consider shooting this there? L.A. is big, sunny, has palm trees, feels like a vacation spot and yet has extreme danger in regions like Compton. It was tough getting L.A. as the real location, but in the end, we got a tax rebate,





# SPEAKING TRUTH TO POWER

*Straight Outta Compton* tells the story of N.W.A., set against the gang violence, police brutality and racial tensions of late '80s L.A. Director F. Gary Gray "wanted to create a movie that felt real and authentic because that's what hip-hop is. I didn't want it to feel like a Hollywood movie." Shot with the RED DRAGON and Kowa anamorphics by DP Matthew Libatique, ASC, both wanted the film to feel like "snapshots" of the era.

and L.A. became a central character—not unlike the way Scorsese used Vegas in *Casino*, or the way Clint used Boston for *Mystic River*. This movie and story had to be shot in L.A. And I didn't want to do it anywhere else."

The film was shot by DP Matthew Libatique, ASC, whose extensive credits include *Iron Man 1* and 2, *Black Swan*, *Noah* and *Phone Booth*. Gray calls Libatique, "a genius. This movie would be so different without his expertise. I wanted to create a movie that felt real and authentic because that's what hip-hop is. I didn't want it to feel like a Hollywood movie. I wanted to come up with a visual style that transports the audience to that time. It was essential to move the camera a lot to capture that energy, so we used a lot of handheld. It's almost a docu-style approach, and it's not easy. To light African-Americans wearing baseball caps while you're moving the camera is extremely hard to do well, but Matty managed to do it brilliantly. I don't know how he did it. It's one of the best-looking films I've ever shot. He's extremely collaborative and always makes great visual suggestions."

Libatique reports that working with a large ensemble cast and trying to light in a naturalistic way became quite demanding. "Their wardrobe of black baseball caps made it a challenge to light them from above," he explains. "Then the whole thing of staying true stylistically to the time period was another challenge. I relied a lot on smoke, as well as the camera and digital capture."

Libatique shot with the RED DRAGON, and says that he and Gray wanted the film to feel like "snapshots" of the era. "There was no digital capture back then," he explains, "and a lot of the reference photos we looked at had that feel. They didn't look at all staged. So we tried to maintain that look and feel, so created camera movement and language that felt right."



The director and DP used Larry Clark's *Kids* as a visual reference due to its handheld camera work. "We wanted to let them do what would come naturally if they were recording in the studio, for example," adds Libatique.

The team also used the new MōVI rig, which receives kudos from Gray. "It gave us the flexibility to do extremely complicated roving shots that you'd almost need to reverse-engineer to figure them out," he stresses. "Some of the ideas came from Matty, but it still dovetailed into the realistic style we went for. The combination of the movement, the lighting, the practical look, the docu-style approach and the MōVI moments all helped create a particular filmic language that we developed specifically for the movie."

Libatique says he was inspired to use the new MōVI 15 after visiting Cine Gear, as it could accommodate a stripped-down EPIC or DRAGON. The rig's other big attraction was not hav-



ing it tethered to Libatique's body. "It's a handheld device that can be handed off from one person to another," he explains. "You can go from wide shots to travel shots to close-ups, and end with a hero composition. We did this several times in the film, as we didn't want it to be too 'cutty.' We wanted it to be as fluid as possible and didn't want a separate staged shot of Eazy-E, followed by one of Dr. Dre and so on. They all existed in the same space and frames, and so the camera moved naturally with them, whether it was handheld or using the MōVI rig."

Libatique was also inspired by the new Bethke filters from Vantage. "They have particles inside the glass that create interesting flares that we used in moments of creativity," he reports. "One of my early takes on the film when I first met Gary reminded me of when I did the first *Iron Man*. It felt like an origin story of these pop culture superheroes, so I thought the filters would be a nice way to articulate certain moments of brilliance at the start of their careers. So we'd use them to shoot Dr. Dre at the beginning when he's focused on his music, or when Ice Cube is working on his lyrics. It was a nice way to underscore that these guys were something special."

The DP shot with Kowa anamorphics. "Oddly, it's just a four-lens set," he notes. "There's a 40mm, 50mm, 75mm and 100mm, and we stayed on those, though we did switch back and forth between anamorphic and a set of spherical Zeiss Super Speed Mark IIIs. It's an anamorphic film, but at times we switched to the spherical for close focus, as anamorphics typically don't have enough close focus to give you the proximity you sometimes want from camera to subject."

For lighting, Libatique used a lot of LEDs and "stuff in the air, like Kino Flos," thanks to their modular, lightweight LED technology. "Most interestingly, we used Martin MAC Auras, LED-based moving lights," he reports. "We used them for the lights on cop cars, as they're very easily interchangeable with a very simple board. But the main reason we used them was the

need to cover so many performances in the group's first tour."

The team studied photos from that tour for reference, replicating the walls of rock 'n' roll Par Cans behind the group. "It was a very simple, smart set," he continues. "We wanted to give each song its own color palette, and the Auras allowed us to change color palettes within the same lighting rig. Even though it's a period piece, we just didn't have time to change gels on regular, old-school, rock 'n' roll Par Cans. But with the LED technology, we could switch out a board very quickly and easily."

The DP also worked closely with his regular dimmer-board operator, Joshua Thatcher. "I'd come up with a color palette for each track, and we'd just create a different one as we went," he explains. One base color was the distinctive sodium-vapor color, which was used to reference the era. "So many street lights have been switched to LEDs now, and we actually got the city to change back certain street lights for our night shoots," says Libatique. "That gave us that specific urban look we wanted."

Libatique also used a lot of Dedo [Dedolight] Octagons, "a very low-profile, skinny octagon powered off a Dedo lamp that doesn't need much power, but which gives you a really nice, soft key," he says. That light was often used along with a SUMOLIGHT, especially for beauty lighting when scenes featured women. "It's a smaller version of the octagon shape, which is an LED rather than an HMI," he says.

Both Gray and Libatique say that the shoot was tough. "Shooting is always crazy time compared with post and editing," says Gray. Adds the DP, "We had a shorter schedule doing it in L.A., plus we had the challenge of dealing with some big set pieces."

These included Ice Cube's first performance with Dr. Dre in a small club. "That was a little more street and low-fi," notes Libatique. "It wasn't glossy or polished. Then you see the band together on stage for the first time, and slowly, but surely it elevates until they go on their first national tour where the lighting becomes far more sophisticated."



# SPEAKING TRUTH TO POWER

There was little time to pre-light these scenes. "We pre-rigged, but it was a challenge for my gaffer, Jeff Ferrero, and I had to get in there and dial things in before we arrived with cameras," recalls the DP.

The team used an LED panel rig provided by VER/Cineverse that was also used in *Gravity*, required for a car chase sequence with Dr. Dre. "It's all LED, and you can run video content through the panels, so the light modulates on the character and on the car for reflection, making it appear as if you're driving along the street even though it's shot on stage," Libatique explains. "I had plate shots of Century City and Sunset, and I'd feed those plates through a server, which were then projected into the light panels, and the result is the illusion of realism."

Libatique's camera crew, which included 1st AC Matt Stenerson, also stripped down the DRAGON so Libatique could handhold it inside a car. "I was able to hold a single camera while we drove with just one umbilical cord going into a battery system at my feet to power a remote focus," he explains. "That way, the focus puller didn't have to be in the car with me. This was amazing as digital systems usually need so many cables, but I was virtually un-tethered and could pan around like I was using a DSLR—but I'm shooting 5K!"

The film was edited by Billy Fox, whose credits include *Footloose*, *Hustle & Flow*, *Law & Order* and *Pee-wee's Playhouse*. "He cut while I shot through production and only came to set once for the big 'Detroit performance,' which we actually shot in L.A.," says Gray. "I wanted him there to make sure we got the coverage for this huge sequence that not only included N.W.A performing, but also a riot and a big action sequence. Billy is a great collaborator and we worked well together. We had a fairly relaxed schedule for the

(Cont'd on page 69)



For Gray, depicting the humanity behind the group was essential. "...it's the 'why' that I wanted to explore," he notes. "It was all about digging deep into the people's lives behind the words and the music, discovering the humanity behind those people. That's what I hope sets this movie apart from your typical music biopic. You get the sex, drugs and rock 'n' roll because that's entertaining, but the depth and the performances you'd normally get with a different kind of drama will surprise people, I think." All images by Jaimie Trueblood © Universal Pictures

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## Neurotic New Yorkers. Messy relationships.

Art house sensibilities. The Manhattan skyline. It may sound like the perfect recipe for a Woody Allen film circa the late '70s, but, in fact, all these ingredients—along with a good serving of comedy—form the basis of *Mistress America*, the latest film from acclaimed writer-director Noah Baumbach that premiered at the Sundance Film Festival and has been released by Fox Searchlight. The director, whose credits include *The Squid and the Whale*, *While We're Young*, *Kicking and Screaming* and *Margot at the Wedding*, cowrote the script with the film's star, Greta Gerwig, an indie actress who starred in Baumbach's *Frances Ha* and *Greenberg*, and who, coincidentally, starred in Woody Allen's *To Rome with Love*.

Gerwig, an inspired comedienne in the tradition of Carole Lombard, plays the self-absorbed Brooke, an assertive and self-styled late-twentysomething hipster whose "careers" include interior designer, aerobics instructor and social-media maven. The screwball comedy features the director's continued steely examination of characters and their various delusions, in this case, a story that kicks into gear when the self-invented Brooke meets the timid Tracy (Lola Kirke), a freshman in her first semester at Barnard College whose divorcée mom (Kathryn Erbe) is about to marry Brooke's widowed dad. Tracy, an aspiring writer, is insecure about herself, as well as life at college, and Brooke quickly takes the younger woman under her capable wing.

The film was shot by cinematographer Sam Levy and marks his third collaboration with Baumbach. His credits include the recent *While We're Young*, *Frances Ha*, *The Romantics*, *Wendy and Lucy*, and the TV series *Green Porno*. Levy met Baumbach through the late, great DP Harris Savides. "He was a friend and mentor who shot *Margot at the Wedding* and *Greenberg* for Noah," explains Levy. "When Harris wasn't available for *Frances Ha*, he suggested me, and I shot the whole thing in black-and-white using a Canon 5D Mark II."

# MANHATTAN

Writer-director Noah Baumbach and DP Sam Levy shoot 2K for a '70s-inspired look in their latest collaboration, the funny, slightly dangerous screwball comedy *Mistress America* | **BY IAIN BLAIR**

# MIS



# ADVENTURES



# MANHATTAN MISADVENTURES



This time out, Levy and Baumbach returned to color. In terms of the overall look of the film and its color palette, Levy notes that he was initially inspired by *Wild Flowers*, a book of early street photography images by Joel Meyerowitz. “I found the book right after we finished shooting *Frances Ha*,” Levy recalls. “I was really struck by the personality of his images. They looked like slide film, with this amazing glow, texture and grain. They also had this very specific silver-blue tinge that really resonated with me. It captured my imagination, and that was the starting point.”

In order to capture the retro, ‘70s/‘80s slide film look, Levy contemplated using film, but ended up shooting with the ARRI ALEXA Plus. “I hadn’t used it on a movie before—although I had done commercials with it and was very pleased with the results,” he says of the capabilities of the camera. “The film was shot when there was still a film lab in New York, so Noah and I discussed shooting on film stock, as it was definitely an option to get that old-fashioned look we wanted. But I really liked the ALEXA, so shot some tests.”

Levy shot comprehensive tests with Gerwig that included night exteriors to experiment with underexposure and day interiors to

examine the camera’s contrast range. He also lensed on a sunny day in an uncontrolled environment. “I wanted to see what kind of latitude we were working with,” he explains. “I wanted to see what the tonal range was, as well as the personality of the camera before going into the DI and applying a grade. What does it do? What’s its personality? It’s the same thing as looking at the personality of a film stock before you touch it. The ALEXA has such impressive latitude between the shadows and the highlights. I loved the results of the tests.”

Levy next began scouting locations, which were particularly important, “as I had decided to try and use available light wherever possible,” he stresses. “That came out of testing and our desire to work naturalistically and on the ‘toe’ of the image, in the area of underexposure and shadow.” Levy and Baumbach also commenced working on shot lists, with Levy additionally scouting locations with production designer Sam Lisenco.

“We’d just drive around casually, grabbing shots and ideas, and then we began the more formal part of prep,” he adds. “By then, we had a good sense of locations where we could use available light and also play with underexposure.”

Levy, who shot 2K ProRes, notes that the ALEXA offers two



*Mistress America* stars Greta Gerwig (who also co-wrote the screenplay) as a self-absorbed twentysomething who takes her soon-to-be stepsister (Lola Kirke) under her wing. To capture the retro '70s/'80s slide film look they were after, writer-director Noah Baumbach and DP Sam Levy (above) shot the film on the ARRI ALEXA Plus in 2K ProRes. Photos courtesy of Fox Searchlight

main options for resolution: ARRIRAW, "which is a little more than 3K," or 2K ProRes, which is a smaller file. "What I discovered was that I preferred using a smaller file for this film," he reports. "I saw that the ALEXA has its own grain in its native image, and when I did the tests with Greta, I could see it was reminiscent of film grain. I immediately wanted to tease that out in-camera, as it looked so great. It doesn't look electronic even though it's 'noise.'"

Levy goes on to acknowledge that various post techniques can also apply film grain to digital imagery, "but I could see as we began shooting that there was a zone we could work in, especially with underexposure, where you can expose the digital negative in such a way to tease out the ALEXA's natural grain and achieve a beautiful, glowing image that has the feeling of slide film or of a still print."

The DP adds that shooting at the lower resolution was also "a bit more manageable on set. In order to shoot RAW at the time, you needed an external recorder, and the process of managing the workflow was a lot more complicated than today, as you can shoot RAW with the new ALEXA very easily, but it reminded me of shooting films on Super 16mm and enlarging them to 35mm, a technique where you'd tease out the 16mm grain whether you intended to or not. It would become bigger and really felt alive. So it was a similar experience with the 2K. It just really appealed to me."

For lenses, Levy used a set of Zeiss Super Speed Primes from ARRI/New York. "I shot 95% of the film on them, and I mainly used the 50mm," he reports. He also used an Angénieux 25-250mm HR manufactured in the early '90s. "I used the Angénieux 10-1 because the glass is old and had a nice veiling," Levy continues. "It gave the shadow area of the image a milky, cyan glow. We used it to good effect in Mamie-Claire's house, where late-afternoon sun would flare the zoom lens."

Although the DP relied heavily on available light, his crew did carry a few



fixtures. "We rarely used more than one light as a bounce," he notes. For day interior work, he used ARRI HMIs, "usually the 800-watt Joker," and for night interiors, he used the ARRI L7. The team also used some vintage 650-watt Tweenie Fresnels with old lenses. Levy reports that the L7 was "definitely the most fun light we used on the whole shoot. It's a 1K LED, and you can program it to pretty much any color temperature on the color spectrum,

whether it's daylight or tungsten, or primary colors like red or blue, which is a great feature," he adds.

Levy cites the scene where the two leads go to a bar and run into an old friend of Brooke's. "We found this great dive bar in Midtown, and it was mostly lit by old neon beer signs, which I love, and which, by coincidence, had the silvery-blue color I love." To augment this lighting, the DP added an L7 and dialed it in "as close as possible to the color temperature of the old beer sign,

and then added a little more red to the blue to give it more density."

Lighting played a key role in a concert sequence featuring the band the Dirty Projectors, shot on location in an old music hall in a Polish neighborhood in Brooklyn. "The hall had recently converted all of their lighting to LEDs, so they had all these theatrical LED Par Cans," he recalls. "They were cheaper models, which were quite hard to dial in exactly the color that you wanted. We had to embrace these fixtures, and do the shoot using what was available, but it was so much fun, and the place had a great lighting director. It's always an interesting challenge to bend the aesthetic of what's available on location, and it worked out great."

For the road trip sequence to Greenwich, Connecticut, the team shot for two weeks in Mount Kisco, New York. "This wasn't quite as guerilla as the shoot for *Frances Ha*," Levy explains. "We did have permits, but it was essentially the same approach—keep it small, simple and fluid. We had a lot of fun blocking the actors and the camera. We'd often try and capture a scene in just one shot—or as few shots as possible. The idea was to be as light on our feet as possible, and to be playful and to have fun. Hopefully, all that got transmitted into the film itself."

Levy explains that one of the most interesting aspects of the shoot was working in the 2K format. "There's a move towards making files bigger and bigger, and a lot of filmmakers want to have the bigger resolution," he says. "But shooting this film made me realize that you don't need massive resolution to achieve an image that's very beautiful."

Levy's favorite scene in the entire film is when Tracy returns to Brooke's apartment after a fun night out on the town. "It's very dim, and mostly uses practical lighting," he explains. "We had a 1K Fresnel bounce tucked away in a corner, and we played a lot with underexposure. When I saw that scene projected, I could see the true quality of the image. We did very minimal processing on the film. It's just 'there,' and I really like being able to do as much in-camera as possible. I found out that, with the 2K on ARRI, there's a lot of information there—but not too much information. I was very happy working with a medium-size file



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In terms of the overall look of the film and its color palette, Levy notes that he was initially inspired by *Wild Flowers*, a book of early street photography images by Joel Meyerowitz.

that's bigger than 1080, but not 4K or 6K. It was a very satisfying experience."

The film was edited by Jennifer Lame, who recently cut *Paper Towns*. Dolby sound mix was shaped by Micah Bloomberg, while Paul Hsu was supervising sound editor and re-recording mixer. The DI was completed at Box in New York City, with director and cinematographer working closely with Pascal Dandin, a recognized photo retoucher and top-notch colorist who had worked with Levy on the DI for *Frances Ha*.

"There was a certain amount of processing," Levy reports. "Even though we shot in 2K ProRes, we shot in Log C, ARRI's raw mode, which is pretty flat. So, Pascal, who works on the Baselight, used different methods to introduce contrast into the image, and we processed the raw files to give them more contrast and uncover the right density of color and contrast, especially in the darker scenes. It's always a balancing act. You don't want to put in too much contrast, but, then again, we were trying to re-create that slide film print quality that has a specific glow and 'snap' to it. The three of us went back and forth until it all felt right and everyone was happy."

Summing up, Levy refers to shooting the film as "a very satisfying experience. Working with Noah, Greta and Pascal was wonderful. Even though the film isn't really 'silver blue' in terms of its color palette, there's definitely a continuity of spirit there, from the first moment of finding the *Wild Flowers* photo book through to seeing the film on the screen at Sundance. I'm very happy with the way it turned out."

HDVP

To learn more about the film, visit the website at [foxsearchlight.com/mistressamerica](http://foxsearchlight.com/mistressamerica).

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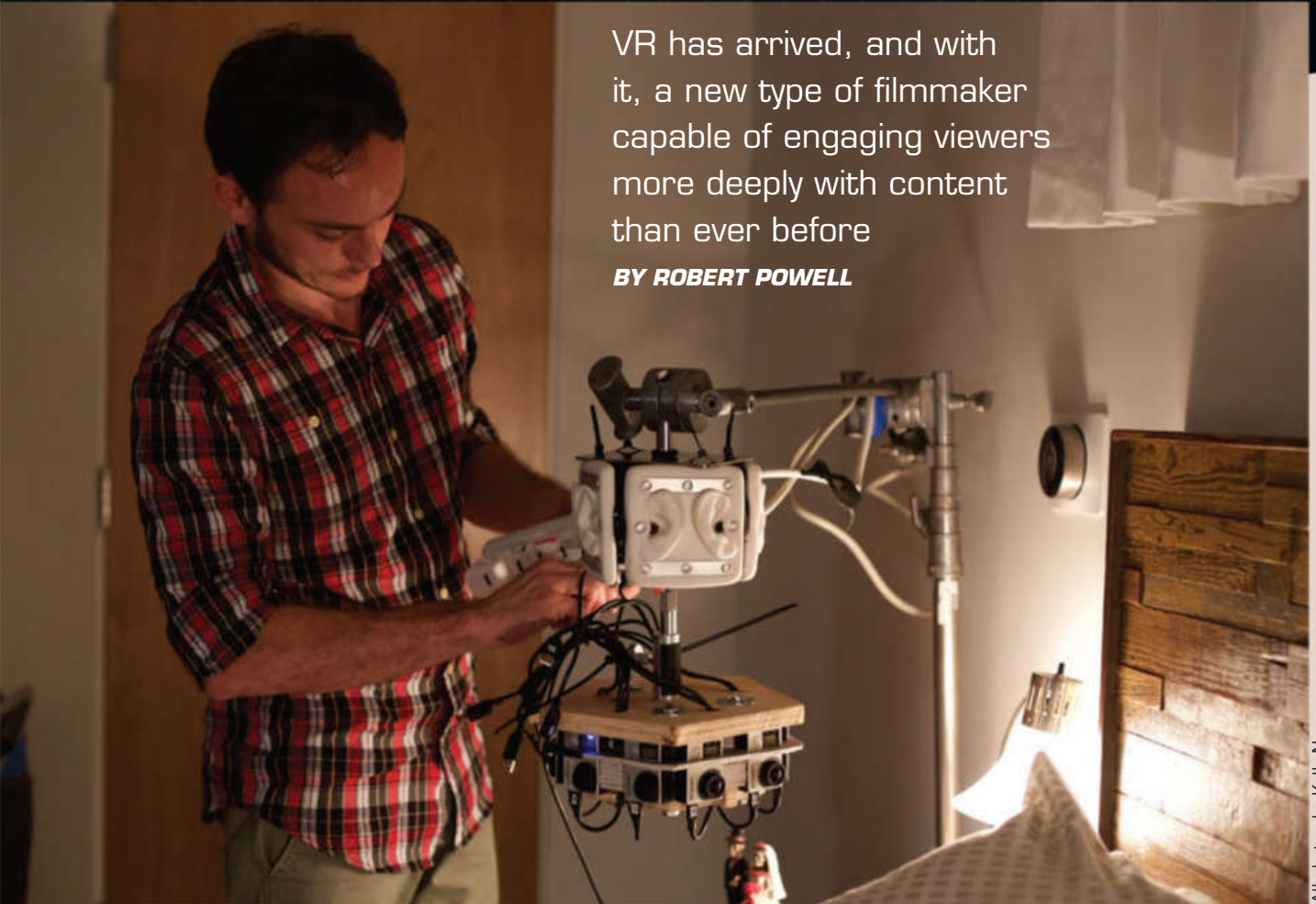


# VIRTUAL REALITY CINEMA:

## A NEW MEDIUM EMERGES

VR has arrived, and with it, a new type of filmmaker capable of engaging viewers more deeply with content than ever before

**BY ROBERT POWELL**



All photos by Kelly Newman

**Virtual Reality (VR), the next great frontier for film and entertainment,** is no longer in a phase of incubation, but rather in its last throes of anonymity. For those unfamiliar with this technology, VR involves wearing a headset that covers your entire field of vision with a screen to envelop the user with dynamic imagery and sound.

You may recall a deal Facebook made last year to purchase the start-up Oculus VR for \$2 billion, a tidy sum that quickly validated virtual reality as a legitimate new technology. Oculus was launched several years ago via Kickstarter, generating excitement in gaming circles long before its Facebook acquisition, a move signifying VR was becoming a commercially viable platform. It

would seem that VR, and Augmented Reality (AR), allowing reality and virtual reality to coexist on the same screen, are poised to become major disruptive technologies. Analysts predict VR/AR will become a \$30 billion industry by the year 2020.

More impetus for the VR movement came in January this year, when Oculus created Story Studio, an in-house laboratory designed to create narrative VR content while simultaneously researching the best practices required to create compelling VR storytelling. Story Studio recently released the trailer for their sophomore entry *Henry*, a short, interactive VR animation featuring a hedgehog celebrating on its birthday. The work is an exciting entry from the studio, and just one of the many emerging projects in the VR space.



LEFT: Cinematographer Boa Simon adjusts a DIY camera rig comprising of GoPro sensors and omni-binaural ears for recording dynamic audio.

ABOVE: Actors Micah Hauptman and Eva Hamilton share an intense moment in a scene from *Intimate Strangers*.

RIGHT: For *Intimate Strangers*, director Adam Cosco and his actors rehearse scenes exhaustively to plan for every cut.



VR made a clear impression on the gaming community as much as 20 years ago, but it has only recently caught the attention of Hollywood. The big studios recognize VR's promise, but also realize the technology is presently in its infancy. Most of the studios are waiting for consumer adoption, as well as improvements in gear, before it's embraced. Meanwhile, as the studios ponder and pause for adoption, dozens of indie filmmakers have jumped into VR, successfully defining and redefining its language through bold and challenging new films.

While the technology is continually evolving with attractive advancements and improvements in sight (such as rigs that will soon involve just a single lens), filmmaking in VR still comes with a lot of technical trial and error. When you start out, the first priority is the camera. Most camera rigs available today are prototypes that have varying, complex workflows requiring high levels of patience and understanding to get it right. One problem revolves around camera placement. Most VR projects have kept the camera stationary, or used the camera as a first-person POV experience to avoid jolting the user. This has led to projects

using long shots that require a lot of tightly planned action.

*Intimate Strangers* is a new VR film from director Adam Cosco, which challenges many conventions relating to camera movement and editing. Subversive and charming, the film tells the story of a young couple who decides to test the stability of their relationship by inviting a stranger into their lives. Cosco notes that the film was a challenge to create. It combines cuts on camera movement and complex character blocking, using elements and approaches that are rare—or just not done—in narrative VR content today.

"People are overthinking the technology too much, and with that comes a lot of gimmicks," Cosco explains. "There are so many films relying purely on the 'newness' of the medium for effect."

Cosco planned all his shots during production, using the geometry and layout of each actor's specific location to allow them freedom to move around in a 360° field of view. Due to the current limitations in VR, this also forced Cosco to work around problems that simply don't exist in traditional cinema—problems such as actors crossing various stitch lines (the area in which the multiple images from the different VR lenses merge).



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## The New VR Toys



Matterport's Pro 3D Camera creates immersive, cloud-based 3D models of real-world spaces, and is already finding its way into practical film applications like location scouting.

**With VR/AR development only in its** infancy, revolutionary new technology is being introduced at a rapid rate, as more companies seek to tackle issues in the VR space. Here are just a few exciting VR technologies we'll see coming down the technological pipeline.

**Matterport Camera.** 3D scanning isn't anything new, but being able to re-create an environment or object in a completely photorealistic model is unprecedented. Matterport's Pro 3D Camera does just this, creating immersive, cloud-based 3D models of real-world spaces that are bound to disrupt the real estate and hospitality industries, and beyond. The camera has already found its way into practical film applications like location scouting, with companies such as LocationsHub creating 3D archives of their stored locations. Hulu has also created a 3D model of the *Seinfeld* apartment, allowing fans to navigate Jerry's Manhattan apartment and inspect every last detail of his TV home. The camera makes it easy to export scans of environments into VR so they can be fully experienced. It can also assist in shot planning and previsualization of VFX. Matterport's Pro 3D Camera is available now through their website, **matterport.com**.

**Google Jump.** Google's answer to simplifying both the need for an easy VR camera rig and an optimized workflow lies within their new Jump program. It consists of a 16-camera GoPro rig

optimized for their proprietary Jump assembler, transforming ordinary video into stereoscopic 3D VR content that promises to be super-high resolution. If Google delivers on these promises, it will simplify VR filmmaking to the point where it becomes as accessible and as easy to use as a DSLR. Google Jump may very well become the standard bearer for low/micro-budget-style productions, if this is the case, as well as a reliable tool for all VR filmmakers. Google Jump is set for release in 2016. **google.com/get/cardboard/jump**

**Jaunt NEO VR Camera.** Jaunt is a pioneer cinematic company that has created some of the most immersive and dynamic content available on all platforms. It has also been busy developing a professional-grade camera system specifically designed for capturing 360° cinematic VR. Some of NEO's features include utilizing 3D light-field capture, a tool allowing filmmakers to choose their plane of focus in postproduction rather than at the time of capture. NEO will also allow for HDR imaging, as well as high-frame-rate capture for impressive slow-motion effects. It's a seriously cool camera that allows filmmakers an unprecedented level of environmental control in the VR cinema space. NEO will be available to filmmakers in 2016. **jauntvr.com**

"We were told by several people not to do that," Cosco explains. "It became a nightmare to solve in post so, to a certain extent, they were right—but I'm so happy that we crossed those lines because it allowed us to achieve something better. It allowed vast movements in the story, such as when the protagonist moves from one side of the room to the other."

In many ways, actors appearing in VR content will employ traditional theater patterns, required to understand the basic elements of blocking (the positioning and movement of the characters to tell the story in visual terms) within a large 360° space. By extension, filmmakers will need to account for the actors' movements as their stories unfold, challenged to create intriguing material for the viewer no matter where they're positioned.

"This is back-to-film-school for everybody," offers Matisse Tolin, a VR filmmaker, and producer of the film, on VR's dramatically different cinematic art form. "It's a big jump to go from two dimensions to having your entertainment all around you. It forces the audience to experience the film as much as to view it. As a result, it redefines the requirements of production designers to immerse viewers in the surroundings just as much as it redefines camera movement and acting styles."

If you watch *Intimate Strangers*, you'll experience a shot where the camera hovers over a woman lying on a bed talking about a dream. If you're curious enough, you'll find the dream projected overhead on the bedroom ceiling. Meanwhile, her boyfriend is at the foot of the bed, inching closer as he listens to her dream. It's a subtle, yet highly choreographed moment that makes me giddy about the potential complexity we can come to expect in future cinema.

*Intimate Strangers* debuts on YouTube360 and other VR platforms this fall. Meanwhile, VR offers exciting potential outside of Hollywood for many uses; for example, its detail and depth are capable of preparing soldiers as much as surgeons for various life-and-death situations.

As for Hollywood and the future of VR? It seems destined to arrive one day—but when it does, those studio VR tent poles will need to find that elusive sweet spot where narrative and technology collide in a beautiful and powerful way to fulfill and, hopefully, exceed audience expectations.

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## Most of us in the business of creating visual

content are at least casually familiar with the Dolby brand. In the analog days, it was Dolby noise reduction and, more recently, state-of-the-art theater and home surround-sound technology. Founded by engineering genius Ray Dolby, Dolby Laboratories has been improving and refining its sound for over five decades. Dolby died in 2013, but his company has continued to flourish with each new generation of innovative technology.

People are calling Dolby Vision a revolutionary breakthrough, with many expressing that the technology creates the best imagery ever seen in cinema, with gorgeous, jaw-dropping colors. So what's the inspiration behind these rave reviews that not only are coming from consumers, but also prominent filmmakers, colorists and cinematographers?

Dolby Vision was introduced at CES 2014. Dolby's latest breakthrough has industry observers and analysts convinced that their technology is a huge leap forward for both cinema and television. Let's examine why.

## DYNAMIC RANGE AND HDR

Dolby Vision is Dolby's version of HDR (high dynamic range). The technology creates images 40 times brighter than current UHD (ultra high definition) TV signals, featuring up to 21 stops of dynamic range for a contrast ratio of up to 2,000,000:1.

The current monitors most of us use to view HD or 4K images are still limited in brightness and dynamic range (the difference between the darkest blacks and the brightest whites), while the human eye is capable of seeing many more stops of latitude. Dolby Vision has changed this paradigm by bringing cinema and home theater viewing significantly closer to what our human eye perceives. Essentially, it's a product line and technical specification that takes the entire production, postproduction and exhibition workflow into consideration to create an image that's much closer to what cinematographers and directors intended. HDR maintains significantly more brightness, color gamut and dynamic range than any other current technology out there.

Improving dynamic range requires significant improvement in



# The Art Of Better Pixels

The new Dolby Vision format from the audio giant dazzles, promising a wider color gamut with 21 stops of dynamic range to dramatically improve the viewer's experience

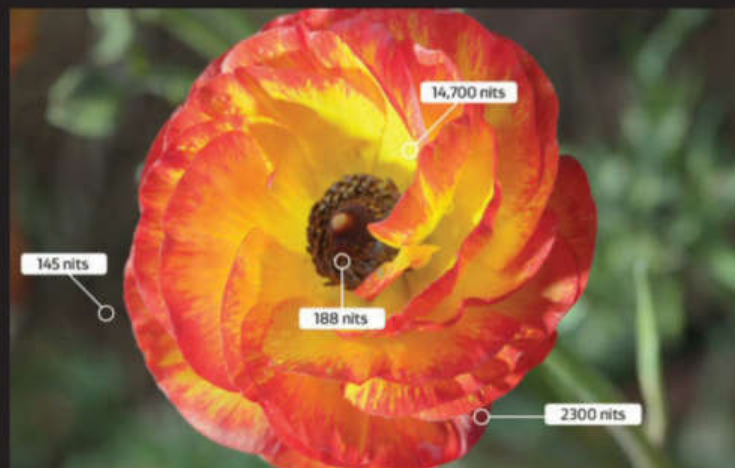
**BY DAN BROCKETT**

two fundamental image parameters: a larger color space (Dolby Vision utilizes the 2012 ITU-approved Rec. 2020 gamut included in the Ultra HD standard), and higher 10- and 12-bit color rates necessary for more accurate color fidelity.

## **DOLBY VISION IS SERIOUSLY BRIGHT**

Dolby co-developed their laser projection system used in Dolby Cinemas with Christie Digital, a company recognized for its state-of-the-art digital projection systems. Cinema is constrained with limited peak brightness and less than 50% of the visible color space. As a general rule, when the maximum brightness on screen is restricted, brighter colors quickly become de-saturated, limiting the realism of our viewing experience.

Brightness is measured in a unit called a nit (1 candela/m<sup>2</sup>). A bright, sunny day is measured at up to 50,000 nits, whereas the average consumer television offers images displayed at only 100 nits plus a small subset of colors. Dolby Vision specifies that content for the home is 40 times brighter than current TVs, resulting in



Dolby's version of HDR, Dolby Vision creates astonishing images 40 times brighter than UHDTV signals, with a contrast ratio of up to 2,000,000:1. The cinema and home viewing experiences are about to change.



more detailed images with greater contrast in both the cinema and home experience.

### PART OF AN EQUATION

Dolby Cinema codifies the entire cinema experience with specifications that include the sound system and cinema seating, plus exact number of seats, viewing angle and floor plan. It even takes into account ambient light levels with exit signage and walkway lighting.

Dolby Vision is also paired with Atmos, Dolby's cinema sound system that offers a home cinema version, as well. The Atmos specifications lay out the exact installation parameters and number of speakers required, channels of amplification and viewing/listening distances.

As for Dolby Cinema locations, so far they're in California, Georgia, Missouri, Texas and Kansas. Additional locations also will be opening in Illinois, Texas, California and New York, while Dolby Cinema is also found in the Netherlands,

Spain and Austria. Dolby is partnering with AMC to open AMC Prime locations to also feature Dolby Cinema.

The public will be able to purchase and install Dolby Home Cinema components using similar technology (but utilizing certified components and installation) when paired with a new line of televisions from Vizio and streaming devices from Vudu.

### THE DOLBY VISION CONTENT CREATION PIPELINE

How do content creators ensure that their projects are photographed, edited, graded and finished to ensure maximum compatibility with this format? On set, most cinematographers and directors understand that today's high-end digital cinema and live-broadcast cameras will capture a wider dynamic range and color volume than a Rec. 709 monitor can display. Therefore, special Dolby Vision-capable monitors are available to provide the range and color gamut necessary to see the entire latitude and color volume captured by their cameras.

On-set workflows generally have evolved to a file-based workflow. The files can be in a wide range of formats and types, including PQ, EXR, Log and Raw. In live or on-set viewing, playback from cameras and on-set data management systems support signal output in SMPTE ST 2084:2014 (PQ) into a Dolby Vision-capable monitor. This provides direct view and playback of the camera image in high dynamic range and wide color gamut on the set, allowing for correct exposure, lighting and composition for the much more wide range of Dolby Vision.

"At present, Dolby is the only manufacturer of Dolby Vision-rated monitors, supplying them to productions that will be presented in Dolby Vision," explains Roland Vlaicu, VP of Consumer Imaging at Dolby Laboratories. "Dolby will also be licensing the technology to professional monitor manufacturers soon."

Editing in Dolby Vision retains the entire dynamic range and color information of the timeline. "We've developed plug-ins for most of the industry-standard color-grading tools like FilmLight Baselight, DaVinci Resolve and other grading tools," adds Vlaicu. "Using the plug-in, the Dolby Vision metadata is saved and exported together with the timeline, which gives the editor and the director the greatest



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flexibility in establishing the look of the movie after the cut."

Meanwhile, visual effects (VFX) for Dolby Vision utilizes the same common workflow, tools and practices that are popular today. The biggest advantage comes in monitoring the image. Dolby Vision capable-monitors enable the artist to see the full dynamic range and color volume without needing to bracket the exposure.

Monitoring VFX for cinema or television today on a Rec. 709 monitor requires the artist to bracket the image exposure in order to see either the highlights or black details of the image data in the VFX shot. With Dolby Vision-capable monitors, the artist can simultaneously see the entire dynamic range and color volume of the VFX shot without adjusting the image. This ensures high confidence that the VFX shot can be matched and composited with other live-action or VFX material.

## ACCOLADES FROM FILMMAKERS

Director Brad Bird helmed one of the first Dolby Vision films released in cinemas, Disney's *Tomorrowland*. "Dolby Vision is the best advance we've had in a while," he commented recently. "The blacks are black, plus you can really see the detail in the blacks. The brightness, you almost have to blink [when first seen]. The color range is much greater. If you see *Tomorrowland* in Dolby Vision, it's fantastic."

Other prominent filmmakers have used Dolby Vision, with positive feedback, including Christopher McQuarrie (*Mission: Impossible—Rogue Nation*), Chris Columbus (*Pixels*) and Francis Lawrence (*The Hunger Games: Mockingjay—Part 2*). Hollywood has eagerly embraced the technology with an ever-growing slate of Dolby Vision films from Disney, Warner Bros., Lions Gate, Paramount, Sony, Fox and Universal.

Terence Curren, colorist and owner of the AlphaDogs post house in Los Angeles, observes, "This is truly the next area of picture presentation improvement that, unlike 4K, will actually be very noticeable to the average viewer. When you see a Dolby Vision presentation, either on one of their demo monitors, or better yet, the laser projectors in a cinema, you will be blown away by how much the image pops. The image is so much richer and the colors so much more vivid. Seeing a 1920x1080 HDR Dolby Vision image next

to a normal 4K image of the same material will immediately show you where the ROI for technology is going to be. The average viewer will gravitate to the HDR image."

## HOW TO EXPERIENCE DOLBY VISION

If you're a professional, you have a few opportunities to see Dolby Vision in person, either at a trade show like NAB, IBC, CinemaCon or Showbiz Expo, or, if you're located in one of the states or countries that has Dolby Cinema installed, you can

attend a screening. The Dolby tagline to tout the Dolby Vision technology is "The Art of Better Pixels." Indeed, pushing to increase resolution is significantly less important than garnering color depth, dynamic range and brightness to create stunning imagery.

By thinking outside the mainstream, Dolby has created what's shaping up to be the biggest recent development in motion-picture technology. HDVP

You can learn more at [www.dolby.com/us/en/technologies/dolby-vision.html](http://www.dolby.com/us/en/technologies/dolby-vision.html).

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# RISING DPS GET THEIR PROPS

The 2015 Emerging Cinematographer Awards recognizes some of the industry's next visionaries

**BY VALENTINA I. VALENTINI**

**Founded in 1996** by Rob Kostich, Jr., the International Cinematographers Guild's Emerging Cinematographers Awards (ECAs) is a talent showcase of up-and-coming union cameramen and women. The annual awards show gives promising cinematographers crucial exposure in the motion-picture industry. In 2007, guild president Steven Poster, ASC, ushered in a new era for the ECAs, inviting top talent to present at the awards, with manufacturers, agents, directors, and other industry movers and shakers also in attendance, successfully extending the emerging cinematographers' reach.

This year, while each of the eight honorees mentions Roger Deakins, ASC, BSC, and Emmanuel Lubezki, ASC, AMC, as influences on their bodies of work, it's clear that the guild, as a whole, is also influencing them in a very tangible way. The honorees had an opportunity to showcase their work at the Directors Guild of America on September 27.

*HDVideoPro* took a moment to interview these cinematographers to reveal their inspirations, as well as their favorite, or most challenging, scenes to shoot.



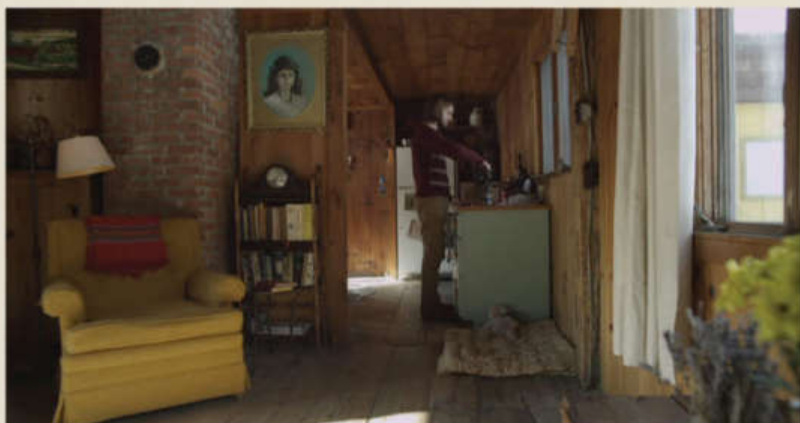
## **John Garrett | Delia**

John Garrett grew up in the film industry, watching his father work as a theatrical lighting designer on *Leap of Faith*, *Batman Forever* and *The Birdcage*, and was hooked from the get-go.

"I knew working on movies was what I wanted to do," says the University of California at Santa Barbara film graduate, who worked his way up from shipping and receiving to prep tech to camera PA and beyond once landing in L.A.

*Delia* is the emotional journey of a father following the aftermath of a tragic hunting accident. The film was shot on the RED EPIC in the fluffy snow of the New Hampshire winter. "That gave us an immaculate backdrop for the lead character's anguish," Garrett notes on the feature's mise en scène. "[I went for a] naturalistic and non-obtrusive shooting approach, using no movie lights, and tried to give the actors and camera some distance."

One of Garrett's favorite moments came by accident while filming a drive-by shot of the hero vehicle. "I had the camera set up on the bank of a stream and was waiting for the call to let me know the scene was ready to shoot," he explains. "It was so quiet that I could actually hear the snowflakes falling. I needed to document that moment, so I racked the lens to near-minimum focus and made sure to hold the soft treetops at the top of frame in the background as I rolled. That shot opens the film—and, every time I see it, I'm right back there and can hear those snowflakes falling again."

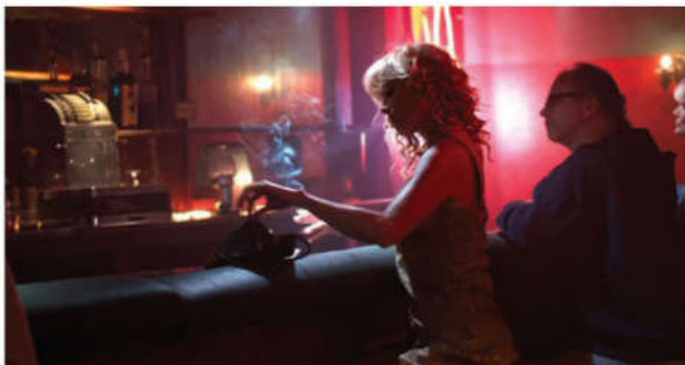




## Tobin Oldach | Thirst

Tobin Oldach was born in Santa Fe, New Mexico. Always one to work with his hands—Oldach feels he would be a craftsman if he weren't already doing what he loves—photography has been an extension of that. It was the very first hand-me-down Pentax camera that eventually led him to cinematography at the Moving Image Arts program at the College of Santa Fe, and from there, to an internship in the camera department on *Green Dragon*. On *Thirst*, a dark tale of a conflicted young man who finds redemption within the unlikely confines of a seedy bar, Oldach shot with the ARRI ALEXA. He wanted the visuals to reflect the destitute conditions of the characters, but to also maintain a sense of timelessness to match the story's fable-like narrative.

"There's one sequence at the beginning that involved our actor standing on the ledge of the 6th Street Bridge in downtown Los Angeles," recalls Oldach. "After analyzing the location and the shots we needed, I realized the only way to get them was by using a Technocrane. I thought that would be totally out of the question for our budget, but through some huge generosity and a stroke of luck, we were able to secure the crane and get the shots we needed. It was a bit hairy logistically, but well worth it in the end, and a good reminder that, as filmmakers, where there's a will, there's a way."

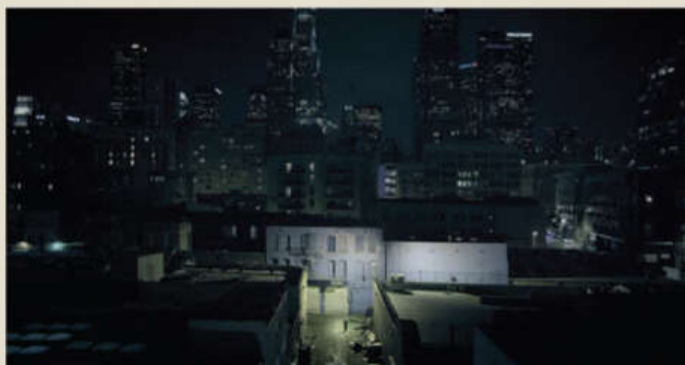


## Daniel Controneo The Other Side

A native of Oakland, California, Daniel Controneo bought his first camera at age nine, spending his youth recruiting family and friends for various movie projects. His ambition continued right through

graduation from Chapman University, working in the camera department of titles such as *Star Trek Into Darkness* and *Django Unchained*, as well as AMC's *Mad Men*. Controneo's work has taken him to the bayous of Louisiana, the gold mines of Oregon and the temples of Japan. His other dream as a kid was to become an astronaut. "So I've always got traveling to space as a fallback option," he quips.

Working on *The Other Side* presented specific visual challenges for Controneo. "There's a very specific progression of destruction and blood effects that occurs throughout the opening fight sequence of *The Other Side*," notes Controneo, who feels that every frame of a Conrad Hall, ASC, film could hold their own as a painting. "We didn't have the luxury of doing multiple passes on most shots in this sequence. Working closely with the stunt coordinator and director Akiko Izumitani, we edited in-camera using the RED EPIC-X, thereby committing to the best angles on set to sell fight moves. As a result, the sequence turned out dark, gritty and effective. Trusting your instincts is a strong asset to utilize even when not forced to."







## Michael Nie | Dust

Michael Nie previously won an ECA in 2011 for the short *Not Your Time* and returns with the fantasy film *Dust*. One of the most challenging situations for Nie on set involved shooting a river sequence at the beginning of the film, where a man teaches his daughter about the world she inhabits. The sequence takes place during magic hour, shot over two days on location in Big Sur, California.

"This scene involved rigging lighting and camera equipment in the cold

river current, shooting quickly at dusk and wrapping out in near complete darkness," says Nie, who takes every opportunity to get back to his home state of Wisconsin. "Once the final light was struck, there would be no light in the narrow canyon, save for the flashlights and headlamps [on our heads]."

All of the equipment needed to be carried in on foot. Crew campsites with large fires were a welcome sight following each day's shoot. "Normally you'd be able to leave a set standing if you were returning to it the following day," adds Nie on capturing the sequence. "In this case, however, we had to load in and load out each evening because the exterior set involved unpredictable moving river water. However, the shooting of this brief, but important scene was executed flawlessly by the dedicated members of the crew that we named 'Team Dust.'"



## David Kruta | Lullaby

The son of Czechoslovakian political refugees, David Kruta is a big fan of Jack Cardiff and credits him with helping to pioneer a slew of technologies while creating his images with a sense of curiosity and playfulness. "He often painted on clear filters to fill in a scene on a stage with some

otherworldly elements," he says of Cardiff's inspirational approach. "His work is a wonderful example of always being able to find a creative solution while dealing with massive technological restrictions."

Kruta won an ECA honor last year with *Wallace*, and also shot *Concussion*, a feature that premiered at Sundance the year before that. This year, he brings *Lullaby* to the screen, the story of a man attempting to cope with the over-stimulation that contemporary society brings. Kruta used his own creative solutions to build a feeling of suspense, shooting long takes with smooth movement in order to avoid distracting the viewer from the storyline, and subtly inviting the audience in.

"We achieved this fluidity by shooting on the RED EPIC with Zeiss Ultra Primes stabilized on a Freelly MōVI M10," notes Kruta on his approach. "We lit with a combination of available light and BBS Area 48 remote-phosphor sources for a soft, augmented-realism style. I hadn't had any real shoot experience with the M10 before. Some of the moves we created were quite precise and may have been better served by a dolly, but with our time and budget restrictions, we opted to try out this new tool, and it served its purpose for the majority of the shots."



## Devin Doyle | Fish Friend

Devin Doyle was honored last year at the ECAs for his work on the music video *Lancaster Stomp*, returning this year lensing another non-traditional piece with the adorable stop-motion short *Fish Friend*. Shot on a Canon EOS 5D Mark II in the Technicolor CineStyle LUT, the production paid no mind to the old adage of

not working with children and animals, taking on both, as well as the painstaking labor of creating a stop-motion animated fish.

"The biggest challenge was figuring out exactly how we were going to portray Vincent, the fish character," explains Doyle, who grew up with a military family, so he often found himself moving to new places. "We shot early tests using a live pacu fish, a distant relative of the piranha, augmented with cartoonish, sharp CG teeth. The realities of shooting practically with a fish made this a non-option, so our producer—and Renaissance man—John Swartz fabricated a puppet from scratch."



## T.J. Williams Color TV No Vacancy

T.J. Williams grew up watching his DP father at work, and was on set starting at an early age. In high school, he began to shoot on his own and for small jobs, and through the years, he has found

that he favors a relaxed camera that moves with the characters and discovers the story through their eyes.

In *Color TV No Vacancy*, a visual poem that contextualizes fantasy with grounded, intimate performances, there's a scene where a couple kisses underwater. Williams and his crew had to figure out how to shoot without a main ingredient: water.

"We wanted the floating to feel real," explains the Seattle native. "To achieve this, we rigged the actors on top of a green table in front of a greenscreen, positioned several fans below them shooting air directly upward and shot at 120 fps. The director told the actors to 'float like you're underwater,' and coupled with the slo-mo, it really brought this scene to life."

Once the shots were layered on top of the background plates, along with the addition of more floating elements, the scene turned out to be one of Williams' favorite shots of the film.



## Jason Hafer Incident on Highway 73

Jason Hafer has been shooting commercials, music videos, short films, documentaries, web series and reality TV since 2006 in Los Angeles, and has a flair for the dramatic when it comes to visuals in his projects.

This seems fitting for his ECA honor

on the sci-fi short *Incident on Highway 73*, the story of a couple taking a trip on Christmas Eve—only to mysteriously disappear.

"The hardest shot to plan and shoot in the film was when Elizabeth gets sucked from the car at the end of the film," says Hafer, who feels he'd probably be a personal trainer if he were forced to do something other than frame beautiful images. "The logistics of the lighting and the wire work on that tiny, rocky road at night were pretty tough, but we had a great stunt team that helped us make it happen. The process of making this film in that windy canyon, and at night, was incredibly arduous, but a great learning experience. It showed me the true value of having an even temper and positive attitude, plus how important it is to work as a team and adapt on the fly. Now I feel that there's nothing that I can't tackle."

HDVP



**In spite of seemingly obvious compositional** possibilities, competitive tennis has rarely been the focus in theatrical motion pictures. In fact, outside of 1979's *Players* (directed by Anthony Harvey with cinematography by James Crabe, ASC) and the more recent *Wimbledon* (helmed by Richard Loncraine and shot by Darius Khondji, ASC, AFC), precious few efforts even come readily to mind. *Break Point* adds to an elusive list of tennis movies, in this case, following the story of two estranged brothers played by Jeremy Sisto and David Walton. Sisto plays Jimmy Price, once a promising professional tennis player, whose take-no-prisoners attitude on the court—and hard-living life-style—has made him a pariah on the circuit.

Dumped by his hot-shot partner and determined to make one last run at a Grand Slam tourney, Jimmy decides his only shot at success is convincing the partner he ditched at the beginning of his career—his estranged brother Darren (Walton)—to give him one more chance. They reconcile to become a Rocky-esque professional tennis doubles team who try to win against seemingly overwhelming odds.

Directed by TV and commercial veteran Jay Karas (*Jim Gaffigan: Mr. Universe, Workaholics*), the film features extensive scenes of

on-court action, as well as many heartfelt moments shot in and around the Los Angeles area. The production mined the so-called “30-mile zone” for everything it had, shooting in Long Beach and San Pedro, Rolling Hills Estates and the San Fernando Valley, as well as downtown Los Angeles and Griffith Park.

Karas recruited director of photography Jim Frohna (*Transparent, Afternoon Delight*) to shoot the film, meeting him at a greasy spoon before the pair bonded discussing comedy movies, features they both admired such as *Win Win* (shot by Oliver Bokelberg, ASC) and the original *Bad News Bears* (shot by John A. Alonzo, ASC).

“Jay explained to me that he wanted the film to have some grit and looseness of life to it that would inform both its look and the shooting style,” says Frohna. “There’s a certain naturalistic quality to much of what I shoot, and that applies to this project, as well.”

Though the current default for most cinematographers is to originate on digital, Frohna flirted with the idea of shooting 35mm film. “For a brief period, we considered it, or, perhaps I should say, we dreamt of using it,” says Frohna. “I wanted to shoot 3-perf film after being inspired by David O. Russell who shot *Silver Linings Playbook* this way. But we quickly realized that coverage of

# The Troubles

Shot on the ARRI ALEXA, the razor-sharp comedy *Break Point* features a burned-out tennis pro and his estranged brother who try to win a long-shot slot into a Grand Slam—and heal a fractured family along the way

**BY KEVIN H. MARTIN**



all the tennis tournaments using film would be too expensive."

The ARRI ALEXA system was finally chosen. Frohna performed lens tests to discover character and grit, choosing a Baltar lens package that has been around for about half a century—a vintage set of Zeiss Super Speeds with ancient glass to take the edge off digital capture. "Putting old lenses on new digital equipment plays down the crisp, clear quality that's so typical of digital and brings more character to the visuals," he explains.

Karas and Frohna trusted their intuition and came up with a productive plan to cover the tennis action. "We spent a lot of time staring at a diagram of the tennis court deciding on multiple angles for the different tennis matches," says Frohna. "As we ramped up towards the final match, we kept trying to raise the stakes visually.

"As things heat up, plot-wise, we employed more dolly moves and were able to afford some Steadicam days," Frohna adds. "We also referenced a lot of actual pro tennis tournaments and learned the basic language of how to follow the action. In that way, we were truly documenting the actors as players in the tennis scenes."

The director and DP also designed camera shots and lighting that would reflect the different temperaments and playing styles of each brother's persona. In essence, the way they

play tennis is a reflection of the way they live their lives.

Frohna employed handheld coverage in early scenes for Sisto, playing a character more apt to go for aces even if it means hitting double faults, while a more static approach was needed to capture the tamer brother played by Walton. Ultimately, a subtle merging of these styles comes into play as the pair joins forces both on and off the court.

"I shoot a lot of handheld and love operating the camera this way," Frohna admits. "But handheld, for me, isn't about moving the camera just because you can, or adding extra movement to give a moment some energy. Handheld means that there's a human connection between the actors and the audience. Good handheld should never call attention to itself, but simply allow an additional level of participation or connection for the audience."

As development continued, the tone of the piece began to evolve with a fairly straightforward shooting style to support both the comedic and dramatic action.

"We carried dollies for the cameras throughout the shoot and did some of our work on sliders," Frohna explains. "We had a single camera ready for most interior scenes, and two cameras for our tournament days. For the sports action on court, we

# With Doubles







Directed by TV and commercial veteran Jay Karas (top) and shot by DP Jim Frohna, *Break Point* is a comedy about the estranged Price brothers, played by Jeremy Sisto (top, right) and David Walton (right), who come together as a doubles team for an against-all-odds chance at entering a Grand Slam tennis tournament. The film was shot on the ARRI ALEXA with a Baltar lens package, a vintage set of Zeiss Super Speeds with older glass to take the edge off digital capture. Notes Frohna, "The movie doesn't have that glossy commercial sheen, which meshed quite well with the tone of the film. We were able to create so much scope and scale with limited resources."



were on zooms quite a bit—not so much for in-camera zooming, but to give us versatility, allowing us to make quick frame changes."

Select action sequences also employed slow-motion footage as captured via the ALEXA. Some scenes were meticulously choreographed, while other times the actors would just hit and try to get some good points in. Shooting the tennis sequences was nerve-wracking for the actors—and, for Frohna, who came up with a way to protect himself from flying tennis balls.

"Sometimes I'd be handheld just a short distance in front of Jeremy Sisto as he was serving the ball," Frohna says. "To keep myself safe, I wore baseball catcher's gear, plus a protective cup, a helmet and a visor with a custom hole for the camera eyepiece. When I was on the dolly with the camera, we had some grips surrounding me with tennis racquets, and they would whack away any errant ball heading for the lens or the operator as we filmed. Lo-fi techniques served us quite well."

With the picture's preponderance of day exteriors—over half of the film's 24-day shooting schedule was spent on the courts—the lighting was a mixture of creative desire and financial necessity. "With our budget, we had to maximize what the





Broad Green Pictures



Broad Green Pictures

sun was giving us on the tennis courts a lot of times," says Frohna. "The movie doesn't have that glossy commercial sheen, which meshed quite well with the tone of the film. We were able to create so much scope and scale with limited resources.

"Our AD and I talked through the schedule ahead of time and he made some smart choices to avoid being stuck on tennis courts during the midday, dead-overhead sunlight," he continues. "Of course, there are very few scenes where I watch and wish I had been able to control the sunlight better, that goes with the territory, but I did make sure that the scenes that really mattered were shot at the right time of day."

Given the demands of the relatively short schedule and the number of pages to shoot each day, Frohna elected to forego LUTs and any kind of on-set image adjustment. "I light and expose how I want a scene to look and know there are a number of things I can do once we get to the color timing in post," he explains. "There were a number of VFX shots, provided by Ken Locsmandi, required during various tournament play, but, fortunately, the shooting style and workflow didn't have to change to accommodate those shots." Locsmandi is VFX supervisor at Filmworks/FX, Inc., and the DI was performed at Chainsaw by feature colorist John Persichetti.

"Before shooting *Break Point*, I hadn't done anything sports-related," Frohna adds, enjoying the challenge of capturing the tennis action as much as the personalities on camera. "I was impressed with how hard both Jeremy Sisto and David Walton trained for all the play action. It took a lot of commitment and extra hours to do it, but to root for these two brothers, we needed to see them playing the game on screen. I think that really paid off." HDVP

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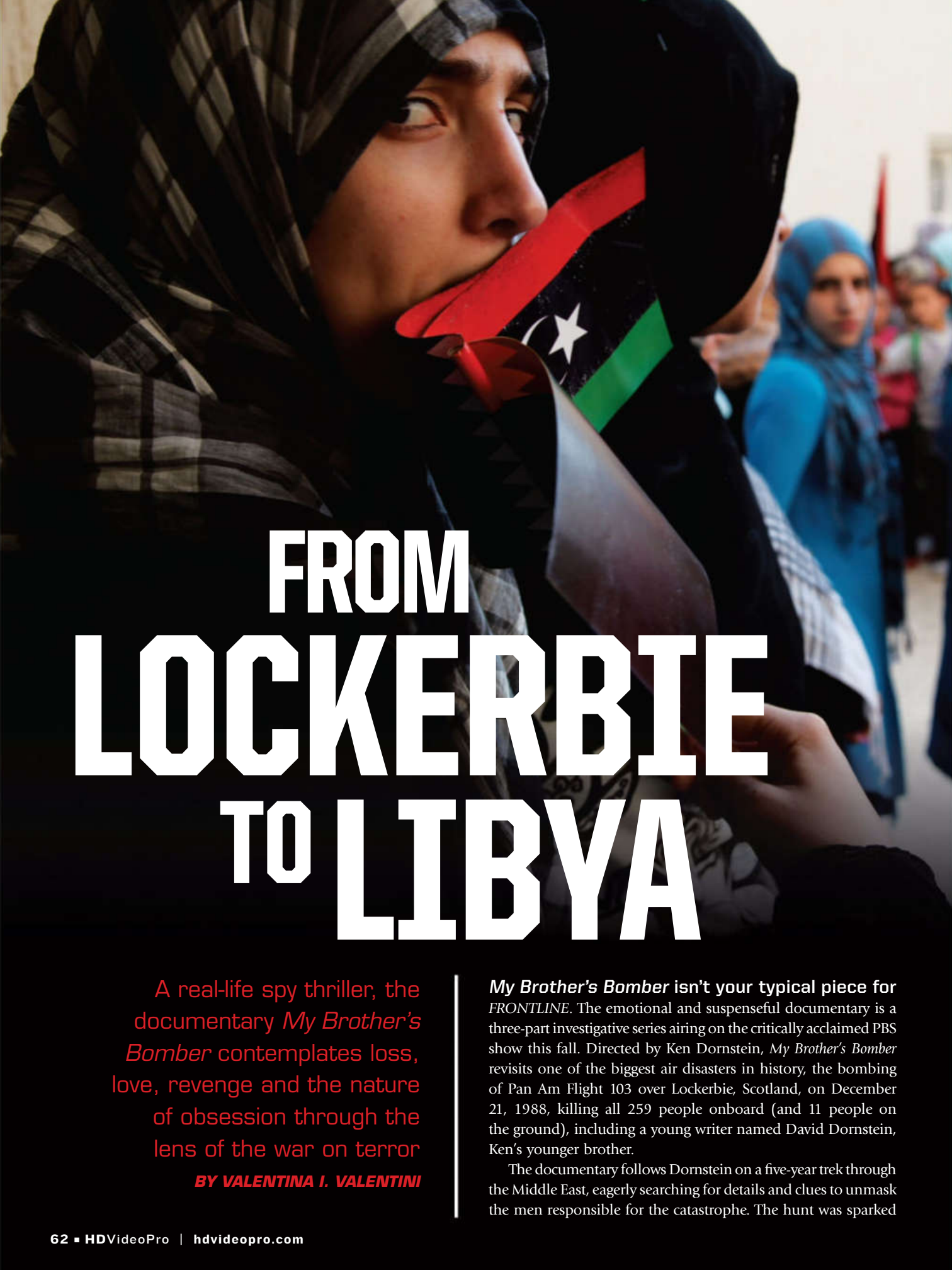
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A woman in a black and white checkered headscarf is blowing a rolled-up Libyan flag. The flag features a red top section, a black middle section with a white star and crescent, and a green bottom section. In the background, other people wearing headscarves are visible, suggesting a public gathering or protest.

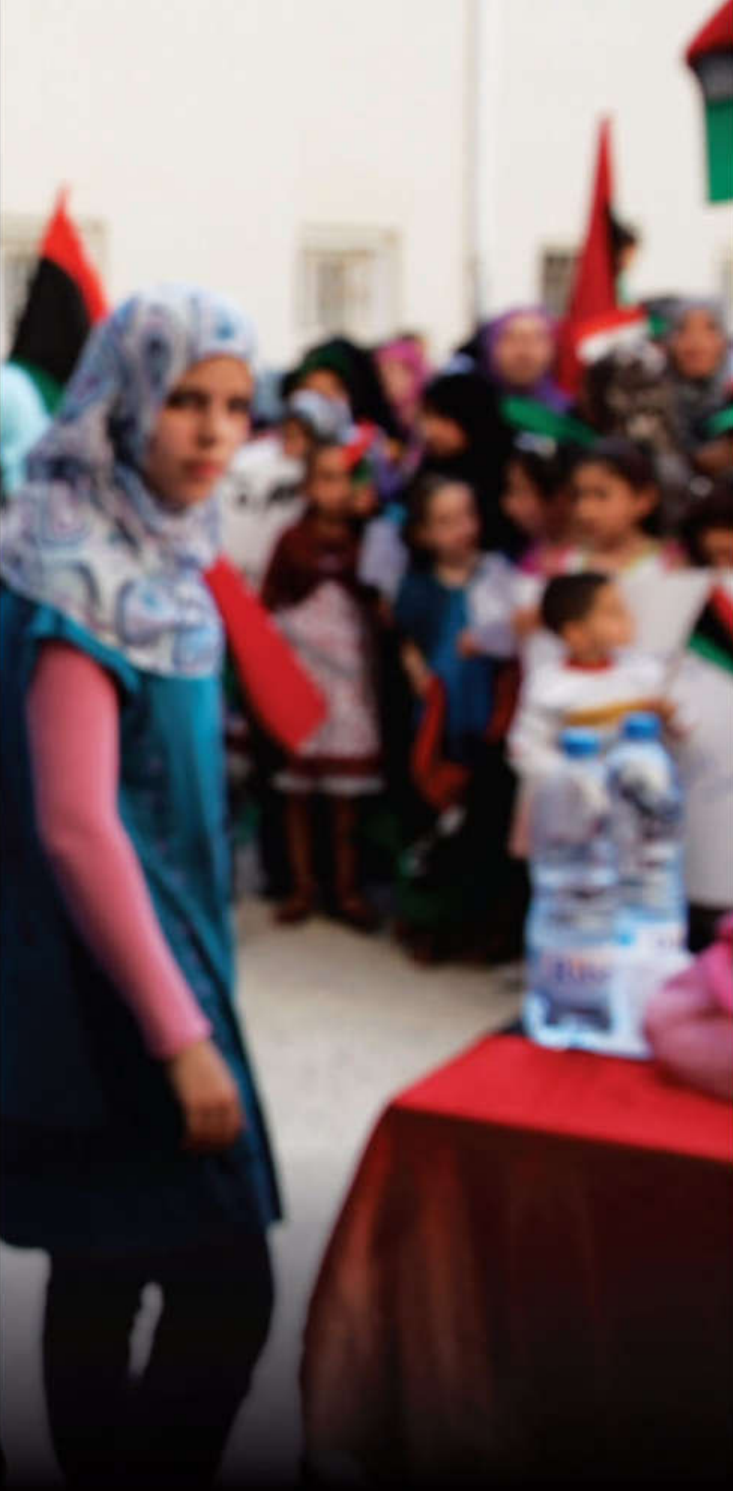
# FROM LOCKERBIE TO LIBYA

A real-life spy thriller, the documentary *My Brother's Bomber* contemplates loss, love, revenge and the nature of obsession through the lens of the war on terror

**BY VALENTINA I. VALENTINI**

*My Brother's Bomber* isn't your typical piece for FRONTLINE. The emotional and suspenseful documentary is a three-part investigative series airing on the critically acclaimed PBS show this fall. Directed by Ken Dornstein, *My Brother's Bomber* revisits one of the biggest air disasters in history, the bombing of Pan Am Flight 103 over Lockerbie, Scotland, on December 21, 1988, killing all 259 people onboard (and 11 people on the ground), including a young writer named David Dornstein, Ken's younger brother.

The documentary follows Dornstein on a five-year trek through the Middle East, eagerly searching for details and clues to unmask the men responsible for the catastrophe. The hunt was sparked



Rachel Beth Anderson

after Abdelbaset al-Megrahi, the only person convicted of the crime, was released from a Scottish jail in 2009.

Dornstein's plan was to enter the Middle East, using the fog of war in the final months of the Libyan conflict to see if secrets held for decades could be revealed. He hired cinematographer Tim Gruzca, who, in turn, invited cinematographer Rachel Beth Anderson to assist him in filming the documentary. Having already collaborated with Gruzca on other *FRONTLINE* assignments, the pair were familiar with each other, while Anderson, who had additionally spent six months on the ground in Libya, was familiar with the region. At the time, their only realistic option for entry into Libya was by sea.

"We chose a 30-hour fishing boat trip from Malta into Tripoli as the rebels took control of the city and [Muammar] Gaddafi went into hiding," Anderson recalls.

Anderson has worked consistently on the front line for years since leaving her home in North Dakota. Always aware of wanting more than her hometown could offer, Anderson focused on Broadcast at the University of Nebraska until she received an email to apply for a Fulbright Program, a note offering to take a dozen journalism students to Egypt for the summer to learn about war correspondence and conversational Arabic.

"I was, like, sure, that sounds great," she quips. "Who doesn't want to see the pyramids?"

Her parents had driven down from North Dakota to see her for Thanksgiving at the time. She informed them of her plans to go to Egypt and, although ecstatic about her opportunity, they were naturally nervous for their child's safety in such a dangerous region of the world.

"I was supposed to do the nightly news and tell a story in under a minute," Anderson recalls, of previous career goals before discovering cinematography. "I was really unsatisfied with what my job was going to be, and I wanted to connect with people on a deeper level. I was intrigued to find out that, when you held up a camera to people, they let you into their lives. A minute with a camera, and people tell you their deepest, darkest secrets. It's what pulled me into wanting to do what I'm doing, the hunger to understand how other people live."

As Anderson chugged across the Mediterranean to meet Gruzca, she was accompanied by a handful of journalists, as well as Libyans returning home after fleeing persecution by the regime decades before. "We were stopped by NATO and circled by a helicopter for hours," she recounts, of heading to the Maghreb region of North Africa. "Spanish Naval officers boarded the boat and checked for weapons. It was definitely a crazy situation, and there I was, in the middle of it, still thinking about how we were going to charge our batteries when basic necessities didn't exist in the places we were headed."

Anderson arrived 24 hours ahead of Gruzca, looking to give herself time to obtain a generator and eight pallets of water. "Preparing to travel into these situations is about making sure you have everything you need, and more," Anderson outlines. "You have to know that you won't be able to get supplies once you leave, so not only do you have to pack all your cameras and gear, but also electricity sources and water."

Dornstein arrived from Boston the following week, reaching Libya via the Tunisian border. Principal photography on *My Brother's Bomber* began in 2011 with Canon EOS 5Ds. As the project continued and the story changed, so did the documentary's shooting style and camera technology. Gruzca and Anderson worked their way up to Canon EOS C300s after it was released the following year, finally settling with the Sony FS7 and a7S to document Dornstein on his emotional quest.

"The dynamic range and low-light capabilities of the Sony a7S has really changed how I balance my light and choose my frame," admits Anderson. "Working in the Middle East with harsh light conditions, I have more choices in hand, which can sometimes be overwhelming, but it allows me to achieve a filmic look without having a controlled environment."

While three-axis gimbal systems still the rage, Anderson says

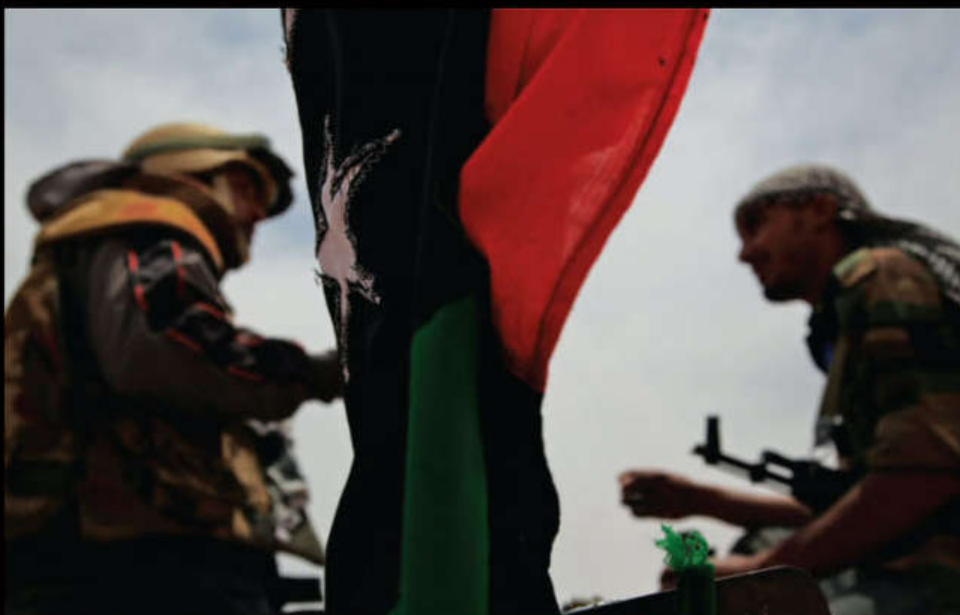


# FROM LOCKERBIE TO LIBYA



Rachel Beth Anderson

For the *FRONTLINE* investigative series, *My Brother's Bomber*, cinematographer Rachel Beth Anderson (opposite page) traveled to Libya to document Ken Dornstein's search for answers some 20+ years after his brother died in the Pan Am Flight 103 terrorist attack over Lockerbie, Scotland. Invited to work on the project by cinematographer Tim Gruzca, the pair used Canon EOS 5Ds, moving up to Canon EOS C300s, and the Sony FS7 and a7S. Of shooting in such dangerous situations, Anderson says, "There's something about putting that camera up on your shoulder. All of a sudden, you're starting to use your technical brain, other parts of your thought process that allow you to push back against the fear and do your job, and do it well."



Rachel Beth Anderson

that when she's a one-woman crew, she prefers small handheld gimbals like the PilotFly H1, noted for its size and ability to hold the Sony a7S. "Let's not forget price, too," she adds. "At about \$350, it's an incredibly affordable option on these types of lean-and-mean, on-the-go assignments."

Beyond cameras and gimbal systems, Anderson realizes the real-world risk to putting herself in the line of fire to serve the story. Her awareness is more acute now than it ever was. Looking back at early shoot days, she knows some of her choices were

risky, but she also acknowledges that it's all part of the game.

"You get to adapt a high tolerance level when you're in places with so much danger surrounding you," she confesses. "In order to make the best decisions, we rely heavily on fixers, their contacts and knowledge of what's happening on the ground. We touch base with them to find out about the issues at hand, where the safe places are to stay, the closest Internet connections, and whether we'll need a satellite phone or a bulletproof vest. Before we go anywhere, we assess whether it's a breaking news situation or not."

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In order to keep calm in tense situations during filming,  
Anderson does what she feels most filmmakers  
do in high-stress environments—stick to the technical.

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Anderson escaped a dangerous scenario while working for HBO's documentary TV series *VICE* in Gaza, when a rocket exploded in a neighborhood she was planning to visit.

"He tells us what's going on because hours later we're potentially going to meet a Hamas group in person," Anderson explains, referring to her fixer. "He explained that Israelis blew up rockets on local Hamas affiliates, the group that we were going to meet, so we were all on edge. We didn't go in because of this intelligence, plus they were about to launch rockets on Israel. These are always very fluid situations. I was also with a crew of six people, and you have to consider how everyone feels. We do risk assessment before going into anything."

In order to keep calm in tense situations during filming, Anderson does what she feels most filmmakers do in high-stress environments—stick to the technical. "There's something about putting that camera up on your shoulder," she explains. "All of a sudden, you're starting to use your technical brain, other parts of your thought process that allow you to push back against the fear and do your job, and do it well."

Staying freelance and working in the Middle East on projects such as *My Brother's Bomber* has allowed Anderson the opportunity of capturing important stories where emotions run high and the stakes even higher. She doesn't see herself going into commercials or narratives anytime soon, and has already directed *First to Fall*, a documentary about two young friends who abandon their peaceful lives in Canada for a place in the uprising in their homeland of Libya. She also continues to work on HBO's *VICE*.

"I feel incredibly privileged to have been involved in *My Brother's Bomber*," Anderson wraps. "I've been able to watch as the facts of Dornstein's investigation began to be revealed over the years. I'm very happy for him after seeing everything that he has come up against during the production of this film. It's wonderful for him to finally have his moment to tell his brother's story and uncover the tragedy of Lockerbie." HDVP

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*My Brother's Bomber* airs as a special three-part series on FRONTLINE on PBS beginning September 29.



# Headphone:X

New Headphone:X technology from DTS, Inc., delivers high-quality surround sound to almost any set of headphones

By Dan Brockett

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**For content creators and** producers, the ability to bring theatrical-quality sound to almost any platform—especially mobile content through headphones—opens up new potential markets for high-quality soundtracks in any playback medium. DTS, Inc., based in Southern California, recently invited me to experience a new technology called Headphone:X. The company's website promises that the technology is "capable of recreating the home theater surround sound experience using only a pair of headphones."

At DTS headquarters, I was led into a demonstration room about 35 feet long by 25 feet wide that literally was covered with speakers. The engineer who demonstrated the system explained that the room was set up in a 28.2 surround-sound array, with a total of 30 speakers surrounding us at the center console where we were listening and watching playback.

The demo began with a simple speaker location video. While seated, a voice moved around the room and announced at various heights as its

location moved to the front-left, center, front-right, sides and rear of the demonstration room. This was followed by a music video of musicians in a studio creating an experimental soundscape with combinations of cymbals, percussion, tools, even flaming torches. The sound was dazzlingly realistic and musical—as one would expect with a high-end Pro Tools system played back through 30 state-of-the-art speakers in a finely tuned acoustic space.

Kevin Doohan, DTS Chief Marketing Officer, asked me to slip on a pair of Sennheiser headphones that were sitting on the console, a seemingly average mid-range set of consumer headphones. The engineer began playback of the same round of video clips I had listened to on the 30 speakers. Incredibly, the sound quality was almost identical! I was sure that at least some of the speakers in the room were still on, but repeatedly lifting one ear of the headphones revealed that no sound was coming from the speakers in the room. It was all coming through the headphones.

The sound was rich, clear, dynamic,

smooth and far more detailed than I thought possible from a pair of headphones. The sound quality I experienced with Headphone:X was, frankly, amazing.

"Headphone:X achieves high-quality surround sound with headphones through two functions," explains Doohan on the technology. "The first is to acoustically model environments with all of their secondary and tertiary room reflections. These reflections create the reverb signature that makes each room sound unique from another. The second function is how Headphone:X models Head-Related Transfer Function (HRTF), a response that characterizes how an ear receives a sound from a point in space. This is what allows us to differentiate when something is located in front of us versus behind us, as well as defining its height and differentiation between left, right or center."

To hear a Headphone:X demonstration and learn how the technology applies to content creators, visit the DTS website at [dts.com/professionals/sound-technologies/headphonex.aspx](http://dts.com/professionals/sound-technologies/headphonex.aspx). HDVP

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## SPEAKING TRUTH TO POWER

(Cont'd from page 38)

cut. It was actually one of the first times I've had an adequate amount of time, and Universal also gave me 10 weeks for the director's cut, which was great."

The film features a number of visual-effects shots, mainly there for the period look, courtesy of Image Engine and Outback. "We used them to enhance the crowds during the huge arena performances, to enhance the L.A. riot scenes with fire and smoke elements, and to paint out modern signs," notes Gray. "And Shane Valentino, our production designer, was great at finding places where we wouldn't need tons of VFX later."

The DI was done at EFILM by colorist Mitch Paulson. "This is as important as all the sound," says Gray. "It should come together like hand and glove. The audience doesn't separate these elements, but it requires hundreds of them to create one satisfying experience. The look of the film helps capture the era, the mood, and helps define it emotionally, so the DI is another vital part of post for me."

"There were a few scenes set in recording studios, and I wasn't happy with what I could get out of the DI," adds Libatique. "So we opted to go back to the raw files, in some cases. I shot at the DRAGON's native 800 ASA, but in the DI, we wanted a bit more texture. Instead of opting for a bunch of windows over shadowy faces, we decided to underexpose it by re-debayering it at 200 ASA and then brought it all back up to a normal exposure in the DI. So, in effect, we were pulling and pushing in the DI, which is something I've done on commercials, but the first time I've achieved it on a movie, and it worked great. It takes the highlights and suppresses them back down. The faces are still dark, but then it all comes back to a more even level where it's balanced all out, and it gave us just the look we wanted."

Did the film turn out the way they hoped it would? "It did, although you always have a vision in your head and then you have to deal with all the realities of filmmaking, budgetary restraints and time," notes Gray.

"I'm very happy with it," says Libatique. "I think it's the right look for the story."

HDVP

Learn more at [straighttuttacompton.com](http://straighttuttacompton.com).

## BIOPIC

(Cont'd from page 74)

ing the award on stage in front of the five million people that were watching.

**HDVP:** Do you have any rituals to psych yourself up before directing?

**Zada:** Preparation, and knowing your material inside and out.

**HDVP:** You created *Take This Lollipop*. How did you attract such a big audience?

**Zada:** I think *Take This Lollipop* touched a fear that a lot of us have—how much information are we harmlessly putting online, and who has access to it. Put a really evil and bad person in the mix, and it can get scary really quickly. Word of mouth spreads like a wildfire. From one tweet and sending it to a few friends, it became the fastest-growing Facebook app, ever. It was a surreal experience that became a global phenomenon.

**HDVP:** Horror movies, even slasher flicks, generally stick to an almost Victorian moral code. You can be pretty sure that the girl who has sex with her boyfriend will wind up dead. Do you have any favorite classic scenes in the horror genre you'd like to share?

**Zada:** I've always loved *A Nightmare on Elm Street* for the "rules" it created for the story world. Don't fall asleep. Rules in a story world are important. In some horror movies, the rules are stated clearly, and others, the rules become a repeating theme for the film. I grew up with very scary movies from the '70s, like *The Shining* and *The Exorcist*, so I usually prefer those. But I love the campiness and characters—Jason, Freddy, Michael Myers—that came from '80s horror.

**HDVP:** You've had a successful career in advertising as both a creative and a director. What inspires and challenges you to keep on going?

**Zada:** I always love to do something new. I'm attracted to projects that allow me to do something new and original, or tell a story in a new and different way. I think people like advertising when it doesn't feel like advertising. Most of my most successful work has been under the guise of entertainment. Dream big, entertain an audience and make the viewer feel something.

HDVP

Learn more about Jason Zada on his website at [jasonzada.com](http://jasonzada.com).



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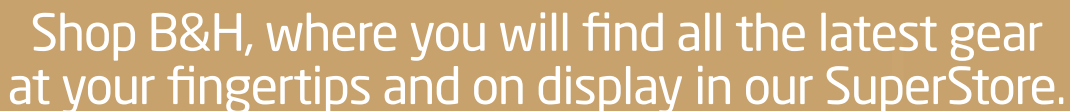
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Courtesy of Jason Zada



# Darth Zada

The filmmaker takes us to the dark side again with his follow-up to *Take This Lollipop*—and tells us why we like it there

By Simon Wakelin

Jason Zada is an expert at entertaining audiences in our digitally networked society, delivering us to the dark side with his customized interactive horror short *Take This Lollipop*, an experience using Facebook data to bring viewers directly into the creepy film. Written and directed by Zada, the film embedded user data such as text, images and video into the fabric of a scary, fictional tale. The result was an impressive cinematic rendering of a horror film, where users play a central role in an on-screen world inhabited by a scary psychopath.

*Take This Lollipop* became the fastest-growing Facebook app ever, attracting over 150 million views, as well as a bevy of awards, including an Emmy®. A chilling presage against online data sharing through social-media veneers such as Facebook, the app spurred thought on how much information we share online.

Zada signed with UTA following the app's success, and now has wrapped another chilling film entitled *The Forest*. It's his first full-length feature, which follows a woman searching for her missing twin sister in Japan's Aokigahara "Suicide" Forest. Focus Features will release the film in 2016. Zada took time out with *HDVideoPro* to discuss why some of us like to be scared out of our wits.

**HDVP:** Why do we love scary movies?

**Jason Zada:** We want to feel something when we watch a movie. We want to leave our lives behind and sit in a

dark theater for a few hours and be immersed in another world. I think scary movies are the perfect way to get an audience to feel something. Your heart races, multiple senses are being thrust into overdrive, and the scare is a bit of a thrill. It's the same reason why people love roller coasters. It's a ride we take people on.

**HDVP:** What can you tell us about *The Forest*? Will it be a bouquet of blood, sweat, tears and chills? How does fear manifest itself in the story?

**Zada:** *The Forest* is a psychological thriller that tells the story of a woman who goes to the Aokigahara Forest at the base of Mount Fuji in Japan to search for her missing twin sister. I really love diving into material that peels away the layers of a character. This film will hopefully be one of the scariest movies you've seen in years.

**HDVP:** What's your biggest fear?

**Zada:** I have some pretty common ones—being buried alive, drowning and large spiders.



**HDVP:** Speaking of fear, would you watch an air disaster movie on an airplane?

**Zada:** I have, several times. It's very claustrophobic to be stuck inside a large, flying tin can, while watching something disastrous happen to people stuck inside a large flying tin can.

**HDVP:** How does your fear manifest itself, and how do you overcome your fear?

**Zada:** When your body experiences fear, there are a lot of physical and physiological things that happen. First, when you're scared, your body is anticipating harm. You tense up. Your pulse quickens. Adrenaline flows through your body. Your heart begins to race. Your mind also begins to prepare for all the bad things that could happen. Fear is powerful and visceral.

**HDVP:** What has been the scariest moment in your life, or your career?

**Zada:** Winning a Daytime Emmy® award for *Take This Lollipop* and accept-

(Cont'd on page 69)

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